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ABSTRACT

Seven papers examine issues in vocational education for the moderately to severely handicapped. The first paper, "Introduction: Perspectives on Vocational Education" and "Rehabilitation for the Handicapped" by C. Hansen and N. Haring sets out terms and definitions and provides an overview for the text. C. Hansen's second paper, "A History of Vocational Habilitation of the Handicapped" traces society's perceptions of the handicapped, showing effects of legislation on social practice. In "Vocational Programming for the Severe and Profound in the Public Schools," A. Lynch and T. Singer review assessment and programing steps and describe a model program. S. Levy points out "The Debilitating Effects of the Habilitation Process," specifying the inadequacy of the sheltered workshop system. K. Larson and J. Edwards describe a model program in "Community Based Vocational Training and Placement for the Severely Handicapped," while J. Alper and S. Alper review the effects of reduced staff expectation in "Issues in Community-Based Vocational Programming: Institutionalization of Staff." In the final paper, "Toward Competitive Employment for Moderately and Severely Retarded Individuals," P. Wehman presents a model for employment in nonsheltered settings. (CL)

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Introduction: Perspectives on Vocational Education and Rehabilitation for the Handicapped

Cheryl L. Hansen
Norris G. Haring

The focus of this monograph is on current vocational habilitation* efforts on behalf of the moderately to severely retarded, who are generally deemed "inconsequential producers" by traditional rehabilitation specialists and who have been historically underserved or unserved. Currently these individuals are relegated to sheltered workshops or work activity centers. Seldom are they afforded opportunities for competitive employment (Greenleigh Associates, 1975). However, as the following papers clearly demonstrate, the moderately to severely retarded can be successfully trained for and placed into jobs through community-based programs and can succeed within the competitive labor force.

An effective community-based training and placement program depends on understanding and cooperation between special educators, vocational educators, rehabilitation workers and parents. Unfortunately, due to the disparity in their backgrounds and training, professionals in these fields are often unfamiliar with each other. This unfamiliarity can result in a lack of communication and cooperation. Thus, in order to facilitate communication and to foster cooperation, mutual terms must be defined and mutual goals must be established.

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* The term habilitation is used throughout this monograph to connote a blend of rehabilitation and education programs for the handicapped.

TERMS AND DEFINITIONS

According to Title V of the Rehabilitation Act of 1973, a handicapped individual is one who "1) has a physical or mental disability which for such individual constitutes or results in a substantial handicap to employment and 2) can reasonably be expected to benefit in terms of employability from vocational rehabilitation services" (PL 93-112 Section 29 USC 706). In contrast, PL 94-142 defines a mentally retarded person as having "significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child's educational performance" (121a.5(4)). Thus, the focus of the Rehabilitation Act is on employability, while PL 94-142 concentrates on general educability. For the purpose of this monograph, the employability of the moderately to severely retarded will be discussed.

The services rendered to the handicapped by special education, vocational education and vocational rehabilitation share certain similarities. Special education provides "specially designed instruction, at no cost to the parent, to meet the unique needs of a handicapped child" (PL 94-142 Section 121.a.14). Vocational education means "vocational or technical training or retraining which is given in schools or classes to prepare individuals for gainful employment" (PL 90-576 Section 122). Vocational rehabilitation services "include any goods or services necessary to render a handicapped individual employable" (PL 93-112 Section 103.a). These goods or services may include evaluation of rehabilitation potential, counseling, guidance, referral and placement services, vocational and other training services, and physical and mental restorative services. The programs described in this monograph combine critical aspects of these disciplines to enhance the vocational opportunities of moderately to severely retarded individuals.

Vocational programs for the adult handicapped are frequently delivered in one of three settings: sheltered workshops, work activity centers and adult activity centers. A sheltered workshop "is a nonprofit rehabilitation facility utilizing individual goals, wages, supportive services, and a controlled work environment to help vocationally handicapped persons achieve or maintain their maximum potential as workers" (National Association of Sheltered Workshops and Homebound Programs, 1968 definition, in Greenleigh Associates, 1975, p. 5). Work activity centers are a subset of sheltered workshops and must "serve those (individuals) so severely disabled that their productive capacities are inconsequential" (Greenleigh Associates, 1975, p. 5). Finally, adult activity centers are "established for individuals with training needs in the most fundamental of skills (e.g., ambulation, eating skills, toileting, basic communications, etc.)" (Lynch, 1979, p. 258).

In contrast, community-based training and placement provides instructional training of job and social skills on an individual basis at an actual job site, usually alongside nonhandicapped co-workers. In addition to preparing the handicapped individual, community-based programs also work to modify variables within the job site which may be detrimental to the client's success. These programs simultaneously prepare the client for the work environment and prepare the work environment for the client.

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It is a misnomer to call efforts at job training and placement "rehabilitation." The term rehabilitation is defined as bringing an individual back to a previous normal condition through education and therapy. Moderately and severely retarded adults cannot be brought back to a state they have never experienced. Therefore, vocational training efforts are habilitative rather than rehabilitative in nature. Through specially designed habilitative instruction, the retarded are supplied with the means to enter the competitive job market. Thus, the community-based training and placement programs discussed in this monograph refer to habilitation, not rehabilitation, as their goal.

MONOGRAPH OVERVIEW

These papers represent the concerns and efforts of several Handicapped Children's Model Programs and Special Needs Programs Project Directors currently involved in vocational training programs, who attended a Vocational Education Symposium held in March, 1980 in Columbia, Missouri. This symposium had a dual purpose: to share results of the vocational habilitation models developed by these projects, and to gain a better understanding of the critical problems facing vocational training programs.

In "A History of Vocational Habilitation of the Handicapped," a framework is presented for understanding current vocational habilitation efforts. Societal perceptions and treatment of the handicapped are examined during the primitive period, when the handicapped were considered liabilities, through the humanitarian period, when they were considered wards of society, to the present, when the handicapped are finally accorded their rights as full-fledged members of society.

Introduction

The effects of federal involvement on the services available to the handicapped are traced through a discussion of legislative efforts during this century.

The specialized skills needed by the special educator to work with severely handicapped young adults in a secondary school job training program are discussed by Lynch and Singer. These skills include assessing the job market, assessing student abilities, developing an appropriate vocational program and preparing the job site. The model program developed at Wilson-Pacific School in Seattle, Washington illustrates a successful school-based vocational training program.

"The Debilitating Effects of the Habilitation Process" are discussed by Levy. In this paper, Levy asserts that sheltered workshops are currently incapable of providing meaningful vocational habilitation for the handicapped, and, indeed, may actually harm the clients they serve. Among the debilitating effects cited are: inappropriate evaluations, lack of training opportunities, lack of training for appropriate work behaviors, lack of suitable training environments, little concern for improving productivity and ineffectual organizational structures. Possible alternatives are presented: improved evaluation techniques and establishment of viable program options, including competitive employment, controlled work environments and non-work alternatives.

Larson and Edwards describe a model of community-based vocational training and placement for the severely handicapped developed at Portland State University. This model places minimal emphasis on evaluation and simulated job training and maximum emphasis on training clients in situ. Basic components of this model include: client search, screening and assessment, classroom prevocational programs, travel training, employer contacts for training materials and for long-term training sites, job exploration and training, and parent contacts. A major premise of the Vocational Careers Model is that a management system which tracks and gives credit for ongoing staff effort is necessary to ensure maximum efficiency.

Staff expectations and behaviors which maintain the institutional environment rather than contribute to clients' independent functioning are discussed by Alper and Alper. Factors contributing to staff resistance to community-based programs include both personal characteristics and the desires for survival, certainty, control, autonomy, acceptance and congruity. Strategies for overcoming staff resistance to change include using a social-democratic milieu to explore staff needs and concerns, using external reinforcement of prosocial behaviors, fostering self-reinforcement by staff and gradually exposing staff to community-based training and placement activities.

In the final paper, Wehman presents a rationale for employing the moderately to severely handicapped in nonsheltered competitive settings. The major advantages to pursuing competitive training and placement opportunities for the handicapped are found in terms of improved wages and benefits, integration with nonhandicapped individuals, achieving normalization, having greater opportunities for advancement, and in the improved perceptions of the handicapped by family, friends, employers and legislators. In Wehman's model, competitive training and placement occurs in three stages: 1) assessing the individual's vocational skills and the work environment; 2) initiating community-based training activities and implementing specific advocacy strategies; and 3) fading staff assistance from the job site. Several suggestions for improved community-based training and placement programs based on actual experience are posited.

EXPANDING OPPORTUNITIES

Several innovative efforts at expanding the opportunities available for the moderately and severely handicapped are described in these papers. These new opportunities have resulted primarily from the increased sophistication of special educators in designing and implementing effective habilitation programs to teach functional skills and in providing these programs in the least restrictive, most normal environments possible. The goal of these endeavors is to improve the lives of handicapped people through assisting them to achieve maximally independent productive lives.

Research has repeatedly shown that the moderately and severely retarded have extreme difficulty generalizing behaviors across activities and settings (Haring & Liberty, Note 1). The prognosis for this population is most hopeful when training and placement are congruent. Hence, the current emphasis on community-based programming for the handicapped is the direct result of two known facts. First, the moderately and severely retarded are capable of becoming productive, competitive employees. Second, in order to maximize their potential, training and placement must occur simultaneously. Through combining aspects of specially designed instruction and on-the-job training, the vocational horizons of the handicapped are expanded.

As these habilitation efforts multiply, professionals have become increasingly aware that the moderately and severely handicapped suffer from chronic problems which require extensive long-term professional involvement. Without such continued involvement, this population is likely to encounter "a life of relative isolation from peers and segregation from the community at large" (Stanfield, 1973). This involvement should focus on three concerns. First, for the moderately and severely retarded, crucial social interaction skills must be identified and taught.

Second, the community, especially employers and nonhandicapped co-workers, must be prepared to accept the handicapped into the labor force. Third, a comprehensive community-based support system must be developed to coordinate all services necessary to maintain the individual within the community.

The effectiveness of these efforts will depend on a continued commitment to quality programming and research. Carefully conducted, rigorous research supplies critically needed data on effective instructional procedures. Similarly, carefully controlled program evaluation efforts permit documentation of successful programs and modification of others.

Historically, applied behavior analysis has been equated with the modification of social behaviors. The emphasis of behavioral programs, however, has generally been on altering or eliminating maladaptive behaviors. Recently, expanded efforts to identify and teach prosocial behaviors have been noted. In this vein, those behaviors which facilitate an individual's acceptance within the community have been the focus of concern.

Several efforts at identifying and operationally defining prosocial behaviors necessary for success in the community are underway (cf. Mithaug & Haring, 1977; Brown & Gruenewald, Note 2). These efforts will continue as professionals refine techniques to observe and analyze the dynamics of potential job sites. Efforts are also underway to develop instructional programs to teach age-appropriate prosocial behaviors to the moderately and severely retarded (cf. Brown & Gruenewald, Note 2; Freagon, Note 3). These programs encompass community, vocational, domestic and recreational aspects of life.

As crucial social behaviors are identified and treatment programs are initiated, data can be obtained to evaluate the effects of these programs not only on the handicapped, but also on their nonhandicapped peers. For example, Voeltz (1980) has demonstrated that the mere presence of severely retarded students in a regular public school can have beneficial effects on nonhandicapped peers.

Dedication to the principle of least restrictive programming provides the basis for the recognition of the crucial importance of systematically preparing the community to accept the moderately and severely retarded as co-workers. One reason early competitive job placement efforts failed was undoubtedly because the employers and co-workers were not prepared and/or not willing to cope with the various problems associated with the inclusion of handicapped individuals as co-workers. In order to rectify this situation, the work environment must be carefully analyzed and a plan must be prepared to address potential problems.

The general populace often holds stereotypes of the characteristics and potential of the retarded which are reflected by the competitive labor force. These stereotypes can be dispelled through discussions with special educators working as community-based trainers and through meeting handicapped persons. Due to a lack of knowledge about the capabilities of the retarded, interactions between co-workers might become strained. Nonhandicapped co-workers might reject or be overly solicitous toward the handicapped worker. Both responses can have deleterious effects. The community trainer can act as a model to demonstrate appropriate methods of interacting with the handicapped worker. Finally, the nonhandicapped worker might exhibit morale problems by perceiving his or her job "demeaned" by the handicapped worker (Chaffin, Smith, & Haring, Note 4). Unfortunately, some people may equate intelligence with the value of an individual. Thus, they feel that if a retarded person is capable of performing a particular job, then the job is not worth doing. Co-workers who feel this way must be made to understand the difference between a person's intelligence and his worth as an individual. Understanding and accepting this distinction implies a modification in a person's values. Changing these values requires conscientious and continued efforts on the part of the community-based trainer.

Finally, intrinsic to the success of any vocational training and placement program is the availability and accessibility of a comprehensive community-based support system. The present arrangement, in which many different agencies, each with its own established history and guidelines, and each with its own jargon and goals, must be reorganized and molded into a single unified body. The 1977 interagency agreement entered into between the Office of Education and the Rehabilitation Services Administration to plan and implement cooperative vocational training efforts on behalf of the handicapped, "has provided impetus for states to establish systems for jointly providing services to handicapped students and for encouraging cooperative activities at the local level" (Razeghi & Davis, 1979). In addition, the reorganization which resulted when the Department of Education was established represents another major step toward this goal. However, interagency agreements and reorganizations provide only partial solutions. Professionals at all levels must work together to improve the opportunities offered to the handicapped and to assure that these opportunities utilize the best practices available and occur in the most natural, least restrictive environments possible.

In order to be successfully maintained in the community, the handicapped individual requires a network of support services for a wide range of community, vocational, domestic and recreational needs (Belmore & Brown, 1978). For example, the individual may require assistance in managing his or her personal finances, including social security and medicaid payments, budgeting and banking his or her paycheck or avoiding an unscrupulous business deal. Similarly, the individual may require assistance in areas of health care, such as personal hygiene skills, or differentiating between sickness and health. These are but two areas of daily living in which the moderately and severely retarded may require assistance. Without the necessary support systems to meet community, domestic and recreational needs, the vocational success of the individual will be meaningless.

Obviously, the needs of the adult retarded are too great and too complex for one individual or one discipline to manage, and, thus, comprehensive systematic planning is required to meet these needs (Sontag, Burke, & York, 1973; Wehman & McLaughlin, 1980). Special educators can contribute to comprehensive service delivery in a number of ways. First, special educators should continue to develop, evaluate and refine effective and efficient skill training and behavior management programs. Their experience and expertise developed through years of working with severely handicapped children can be modified and applied to the needs of the older handicapped. Second, special educators should participate in interdisciplinary efforts towards developing comprehensive habilitative programs. Both PL 94-142 and PL 93-112 mandate that individual programs be developed and implemented by planning teams. Hence, all disciplines with responsibilities toward the handicapped must learn to work together. A comprehensive service delivery system mandates mutual cooperation and mutual respect between professionals.

Finally, and perhaps most importantly, special educators can contribute to a comprehensive service delivery system by developing, in conjunction with other disciplines, a smooth transition from the public school to those agencies charged with the responsibility of providing services to adult handicapped (Vogelsberg, Williams, & Friedl, 1980). All too often individual's records are closed when he or she leaves the public school system. Thus, adult service agencies cannot benefit from previous experience. They must start anew--which may result in a duplication in training effort, or, worse, the repetition of previous unsuccessful techniques. By establishing a two-way communication link between public schools and adult service providers, both parties benefit. As stated previously, the adult service provider can continue habilitative programs initiated in the public school. In addition, the special educator receives a more realistic picture of the actual requirements of a successful community placement.

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History of Vocational Habilitation of the Handicapped

Cheryl L. Hansen

It is often helpful to explore one's history for the perspective that results. The findings of such explorations can be used to measure the distance society has traveled toward providing a full range of services for the handicapped. They also serve as a reminder of the distance left to travel. Examination of our roots (vocationally speaking) is useful for identifying successful and unsuccessful strategies intended to enhance vocational opportunities for the handicapped. Hopefully, by studying previous strategies, past mistakes can be avoided. Finally, historical research illuminates the struggles of the many brave and daring vocational predecessors upon whose shoulders we stand today.

The history of vocational habilitation of the handicapped is shared by many disciplines. Each has contributed to our present level of progress and to our present problems. The contributions of vocational education, rehabilitation, guidance and psychology have been blended with the accomplishments of special education and the perseverance of parents. These three major groups, vocational education, special education and parents are now mandated to work together on behalf of the handicapped. Their mutual interest was officially recognized when the newly established Department of Education combined the areas of vocational rehabilitation and special education. The ramifications of this union are as yet unclear; however, increased mutual understanding may result if the roots of each discipline are recognized and appreciated. It is hoped that this chapter will contribute to that understanding.

COMMON THREADS

While the history of vocational attention toward the needs of the handicapped can be traced to ancient Egypt, it is more commonly believed to have begun in 1784 when Valentin Hauy opened a workshop and training school for the blind in Paris (see Table 1). During the intervening 200 years many things have changed, others have remained the same. The first workshops served the blind, later workshops opened for the poor and indigent. After the industrial revolution, interest in rehabilitation extended to the victims of industrial accidents. Then came World War I and the returning disabled war veterans. These heroes needed retraining to resume their proper role in society. It was not until the Rehabilitation Act of 1973, however, that the severely handicapped were finally recognized as members of society capable of being other than "inconsequential producers" and deserving of vocational training (Laski, 1979).

Regardless of the disability group in question, certain common threads are apparent in the development of training programs. All vocational habilitation programs are based on the premise that "work is good." Work allows an individual to be self-sufficient. It is essential for developing a healthy, positive self-concept. It also provides a valued social outlet for people. Historically,

TABLE 1

LANDMARKS IN VOCATIONAL OPPORTUNITIES FOR THE HANDICAPPED

850 B.C.	Masseurs' Guild organized in Japan
1762 A.D.	Rousseau publishes Emile
1776 A.D.	America establishes its independence
1784 A.D.	Valentin Hauy establishes first school and workshop for the blind in Paris
1837 A.D.	First American Workshop opened by Samuel Gridley Howe in Massachusetts
1908 A.D.	Vocational Psychology born as Parson's publishes Choosing a Vocation
1915 A.D.	Goodwill Industries is established in Brooklyn, New York
1917 A.D.	Smith-Hughes Law establishes the Federal Board of Vocational Education
1918 A.D.	Smith-Sears Act authorizes vocational rehabilitation of disabled veterans
1920 A.D.	Smith-Fess Act (National Rehabilitation Act) extends rehabilitation to industrial victims
1936 A.D.	Randolph-Sheppard Law permits blind to operate vending stands in Federal buildings
1938 A.D.	Wagner O'Day Act requires government to purchase certain items from the blind
1938 A.D.	Fair Labor Standards Act permits wage and benefit discrimination against disabled
1939 A.D.	Social Security Amendments allow sheltered workshops
1943 A.D.	Vocational Amendments expand definition of appropriate rehabilitation services
1952 A.D.	United Cerebral Palsy establishes workshop in Seattle, Washington
1954 A.D.	Vocational Amendments authorize funds for workshop construction
1954 A.D.	Supreme Court rules on Brown vs. Board of Education
1965 A.D.	Vocational Rehabilitation Act Amendments extend evaluation period
1966 A.D.	Fair Labor Standards Act Amendments allow Work Activities Centers
1968 A.D.	Vocational Education Amendments call special attention to the mentally retarded
1971 A.D.	Wagner O'Day Act amended to extend preferential treatment to all disabled
1973 A.D.	Rehabilitation Act revolutionalizes services for handicapped
1976 A.D.	Education for All Handicapped Children Act (PL 94-142) passes
1980 A.D.	Department of Education established. Offices of Special Education and Rehabilitation Services joined

vocational training for the working class was necessary to develop skills with which they could earn their livelihood. In contrast, handcrafts and industrial arts were commonly recommended as a means to promote health for upper class youth.

Another common thread lies in the effect of society's perceptions toward the handicapped. Ross (1951) postulates three major phases in society's perception of and treatment toward the blind. The first phase, called "the primitive period," is one in which the disabled are regarded as liabilities; their status is negligible and prospects dim. This phase is followed by "the humanitarian period" in which the disabled are granted the right to live but are considered wards of society. The final phase, "the social integration period," occurs when the disabled are finally regarded as full-fledged members of society. Throughout our history it appears that, "only the victims of problems for which remedies were known or anticipated have been treated sympathetically" (Strauss, in Safilios-Rothschild, 1970, p. 8). As will be shown, until very recently the severely handicapped were denied vocational habilitation opportunities. The current trend toward increased vocational opportunities for the handicapped is a function of changes in society's perceptions rather than changes in the capabilities of the handicapped.

Once society perceives the handicapped as capable of contributing in a meaningful fashion, reasons are found to support efforts in their behalf. Hence, individuals interested in working with the population emerge and monies, first locally, then nationally, are authorized to develop and support training programs. These programs are usually advocated in the belief that they are ethically proper and economically desirable. For example, one major argument for vocational rehabilitation has always been to reduce the welfare rolls (Safilios-Rothschild, 1970). Anderson (1926) advocated industrial schools for poor children to relieve taxpayers of the burden of maintaining them. Crime reduction is another frequently mentioned benefit of vocational training. John Ruskin, a leader in the arts and crafts movement in the early 1800's is quoted as saying, "The real and noblest function of labor is to prevent crime" (Anderson, 1926, p. 126).

Once vocational training is determined to be the right and proper activity for the disabled, the search for appropriate occupations begins. The belief that a proper match exists between an individual and his or her job is a direct result of the credence given to vocational psychologists in the early twentieth century. Educators believed they could develop scientific, objective methods for evaluating and predicting vocational aptitudes. They took the position that "in the world of human action, we must learn to select the right man, to educate him and to fit him to his exact task" (Keller & Viteles, 1937, p. 292). Naturally, intelligence was the key to determining a person's best-suited vocation. Unfortunately, intelligence scores served more often to deny admittance to occupations rather than to increase opportunities. The resulting discrimination weighed heavily on the handicapped.

Since their inception, sheltered workshop staff were charged with responsibility to provide vocational training for the handicapped. They viewed themselves as schools for training, not as employers. Their stated goal was to prepare their clients for competitive employment. Thus, they viewed themselves as interim facilities which would allow clients to develop and practice their skills until they could be placed competitively into employment. This goal was repeatedly thwarted, and time after time these workshops became long-term employers.

Early schoolmasters, such as Samuel Gridley Howe, were overly optimistic. They were confident that their students need only demonstrate their mastery of industrial tasks to be accepted by competitive employers and to become self-supporting. These beliefs were soon dashed. Similarly, in the 1950's, a majority of sheltered workshops professed the aim of helping as many as possible to return to regular industry despite the fact that only one workshop out of 11 offered vocational training of other than an elementary manual character (tenBroek & Matson, 1959). Unfortunately, conditions are little changed today.

Not only are habilitation goals thwarted, but programs for the disabled have also continuously suffered from financial problems throughout their existence. Although these problems result from many different factors, one common difficulty has been the workshops' struggle to accommodate their dual identity. Training programs for the disabled, notably workshops, function both as charitable treatment programs and as businesses. As charities, their first obligation is to the well-being of their clients; however, as businesses, they are committed to making money. While not irreconcilable, these different goals cause administrators a great deal of difficulty. Consequently, neither goal is truly attained. The unfortunate result of the conflict caused by this dual identity is often detrimental to the clients. Rather than realize their potential as contributing, full-fledged members of society, the disabled are once again relegated to the stance of "wards of society" or "inconsequential producers."

By far the most common thread throughout the entire history of vocational habilitation is optimism. With the notable exception of Itard, nearly all previous writers and observers of the handicapped have been optimistic. They all have stated that conditions were much improved and that the end (i.e., the perfect solution) was near. Like General Westmoreland, they reported "light at the end of the tunnel." After 200 years of vocational training for the handicapped, the light appears to be brighter, but its nearness should continue to be questioned.

THE PRIMITIVE PERIOD

"The primitive period" of treatment toward the severely handicapped has extended throughout most of written history. Indeed, persons with any type of disability were historically considered liabilities to society. The terms "disabled" and "severely handicapped", however, have undergone a number of interpretations throughout the centuries. Prior to the industrial revolution, the standard of mental competency was much lower than it is presently. Thus, those with mild learning and sensory handicaps were not considered a liability because they went undetected. The severely handicapped (those who survived at all) were either hidden or ostracized. A few obviously handicapped individuals, notably blind persons of exceptional intelligence, were accepted into society. Indeed, the blind population has always had the most effective and potent lobby of any disability group (LaVor, 1980).

Music was the earliest occupation available to the blind. Early Egyptian hieroglyphic symbols depict blind musicians. In China, the blind were trained as fortune tellers, while in Japan the masseuse guilds were reserved for blind persons as early as 850 A.D. (French, 1932). Even though there have always been individual successes among blind persons, competence was not attributed to the blind as a class. The basic reason was that while the blind were capable of learning vocational skills, they were considered less capable than the sighted. According to French (1932), the prevalent attitude was "what the blind may be able to do well, the seeing can do better" (p. 198).

In 1784 Valentin Hauy established the first school and workshop for the blind in Paris. This school, which preceded Itard's work with the wild boy of Avyron by about 50 years, was designed to provide skill training with the goal of competitive employment. Hauy succeeded in accomplishing the first objective (skill training), but not the second (competitive employment). Indeed, many of the tasks taught in Hauy's School have persisted to the present day. For example, the first jobs taught to girls were weaving and knitting woven girths, slippers, socks and catgut whips. Boys learned to weave cane chairs and make baskets.

A few years later, in 1791, Henry Dannet opened the School of Instruction for the Indigent Blind in Liverpool, England (Obermann, 1965). Training in music and mechanical arts was provided. This school was supported by special collections at churches and by the income from the workshops.

During the nineteenth century many more schools were established in England, Scotland and Wales. These schools were primarily intended for the blind and deaf with the main emphasis on vocational training and workshop production. During this time some improvements were noted in the care and training of mentally retarded, epileptic, and crippled children and adults. Educators were beginning to realize that these handicapped persons could not be expected to compete in an industrial society unless they received special education and special vocational training.

Interest was also growing in providing training for the poor and crippled. Leibnitz (1646-1716) advocated trade schools for those boys not fitted by nature or intelligence for regular schools. Indeed, the industrial revolution was a major factor in the movement for school education in the industries (Anderson, 1926).

In the colonial United States, the emphasis was on mere existence. Colonists had little time or inclination to concern themselves with the disabled. Poor Laws, patterned after those of England, were established. These laws did not promote the restoration of the disabled to productive work. Many communities merely "warned out" their destitute and disabled--thereby resolving the problem by removing it. Mentally ill and retarded persons were frequently placed in tiny, cell-like, unheated structures and maintained like dogs in a kennel. Other communities solved their problems by "auctioning off" the dependent person to the highest bidder, who was free to extract such services as the victim was able to give during the period of retention and support (Obermann, 1965).

Mentally retarded children in this country were among the last to be worked with and helped to adjust socially and vocationally. Facilities for the care and treatment of the retarded were not established in the United States until the middle 1800's; however, almost from the beginning the emphasis in these institutions was on vocational habilitation.

THE HUMANITARIAN PERIOD

The history of efforts at vocational habilitation of the handicapped is irrevocably entwined with the history of sheltered workshops. Workshops were originally intended to enable the handicapped to work and to acquire the benefits of work (Nelson, 1971). The label "sheltered" implied a segregated retreat of noncompetitive employment. Although noncompetitive in nature, they were intended to provide short-term rather than long-term employment. Indeed early Elizabethan workhouses were deliberately made as disagreeable as possible and wages were kept barely above starvation to encourage inmates to leave (tenBroek & Matson, 1959).

The first American sheltered workshop for the handicapped was established by Samuel Gridley Howe in 1837 at the Massachusetts Asylum for the Blind (later known as the Perkins Institute). According to Howe (in Koestler, 1976) this "separate work department" was not established on capitalistic principles. Rather, "it must be a pecuniary loss at the outset, it is wholly for the benefit of the individuals who work in it" (p. 209). Typical jobs in the Perkins workshop included manufacturing mattresses, cushions, pillows, brushes, brooms, chair bottoms and floor mats.

While the workshop was viewed as an alternative to competitive employment for those clients unable to secure employment due to lack of jobs, its major goal was to place clients into competitive employment. Unfortunately, this goal was never realized. Nelson (1971) cites three reasons for this lack of success: 1) clients were not trained in jobs that industry desired, 2) the blind could not adjust to industry without help, and 3) industry just was not ready to accept blind workers.

Other institutions followed Howe's example. The majority of these efforts at establishing workshops were found in lunatic asylums and in hospitals such as the Pennsylvania Hospital near Philadelphia, where the mentally retarded continued to be relegated. In 1845 Amarich Brigham (in Oberman, 1965), Superintendent of the Utica New York State Lunatic Asylum, observed that

> we are of the opinion that much may be done for their (the mentally retarded's) improvement and comfort; that many, instead of being a burden and expense to the community, may be so improved as to engage in useful employments and support themselves; and also to participate in the enjoyments of society (p. 79).

Education and habilitation of the retarded and otherwise handicapped was enthusiastically undertaken in the mid- and late 1800's, spurred undoubtedly by the success and enthusiasm of Seguin and Howe. For example, in 1893 The Industrial School for Crippled and Deformed Children was established in Boston as the first American school for crippled children. The objective of this school was to train clients in the skills necessary for them to make a living. Religious organizations also became involved in vocational rehabilitation. These groups, which include St. Vincent de Paul, Salvation Army, Volunteers of America, and Goodwill Industries, were essentially interested in helping the poor and indigent. In recent years, however, their scope has broadened to include services to persons with a wide range of handicapping conditions.

Despite these encouraging developments, enthusiasm diminished and support dwindled as instant cures among the retarded failed to occur. Pessimism turned to alarm as eugenicists began to release data indicating the moral degeneracy of the feeble minded. The eugenics movement, which reached its peak in this country during the 1920's, fostered the notion that intelligence is hereditary and therefore the attempt to train individuals with low intelligence was felt to be useless. Indeed, the handicapped were called a menace to society--breeders of criminality and degeneracy (Davies, 1930). The final solution to the problem of the handicapped was believed to include segregation and sterilization. Strange as it may seem, it was during the beginning of this period that circumstances were ripe and actions were underway to transform the retarded into their current metamorphosis--as accepted members of society.

TOWARD SOCIAL INTEGRATION

World War I, the war to end all wars, brought the people of the United States together. The toll extracted by the war was tremendous, but for the first time in history it was not total. Due to advances in medical technology and changing tactics of modern day warfare, many men returned home, men who previously would have died on the battlefield. In the spirit of patriotism and as a thank you to the returning heroes, the Smith-Sears Act for the vocational rehabilitation of disabled veterans was passed in 1918. Although there was no real working relationship with sheltered workshops, for the first time the government assumed responsibility for the vocational rehabilitation of the disabled. This act, along with the Smith-Hughes Law of 1917 and the National Rehabilitation Act of 1920, was the work of one man--Senator Hoke Smith.

Senator Smith served only seven years in the Senate, but those years were remarkable for the number of education bills he sponsored. A staunch friend of vocational education, Smith was responsible for the establishment of the Federal Board of Vocational Education and Rehabilitation programs for the disabled. Smith fought against established prejudices to press for his legislation. An example of these prejudices is the comment of Senator Sherman of Illinois: "After a man has reached the period when he has hardened down into what he is in this world, do you think you can make over the broken instrument, the failure of life? ... Let such failures go to the poorhouse" (tenBroek & Matson, 1959, p. 164).

Early vocational rehabilitation workers accepted the challenge to make over broken instruments. They saw their job as returning clients to the work force. They abided by hard-headed business principles and selected and worked with those individuals with whom there was the greatest possibility of success.

Another far-reaching event took place in 1920, when veterans with service-related disabilities in New York City were given preference in securing strategic locations for newspaper stands. Second preference for these positions was given to the blind. Thus the precedent of preferential treatment of the disabled was established.

Interest in and programs for the blind and disabled lagged as the country struggled through the depression years. Everyone was in the same boat. Few well-bodied people and fewer disabled had jobs. During this period, however, preferential treatment of the disabled was given additional support. The Randolf-Sheppard Law of 1936 gave the blind a monopoly to operate vending stands in Federal office buildings. The Wagner O'Day Act passed in 1938, and required the government to purchase various supply items made by workshops for the blind (the most frequently produced commodities were brooms and mops). Thus, a constant source of contract work and a built-in national small business for the blind was assured. Unfortunately for other handicapped persons, until 1971, when the Wagner O'Day Act was amended, it excluded non-profit workshops which served mainly sighted workers and, more importantly, excluded those which served persons with other types of disabilities.

That same year another piece of legislation affecting the handicapped was passed. That act had deleterious effects on the employees of sheltered workshops. The Fair Labor Standards Act of 1938 effectively denied handicapped the benefits normally accrued by regular workers through allowing a partial exemption from the minimum wage for handicapped individuals who were not capable of normal productivity (U.S. Department of Labor, Note 1). Although the reasoning for this exemption was based on the belief that workshops were charitable organizations, the act has proved to be immensely unfair to the handicapped.

The next year, 1939, marked the passage of the Social Security Amendments. These amendments permitted training of severely disabled persons for homebound or sheltered workshop employment. These programs were to be operated separately from the regular rehabilitation services in each state and were offered only to those states which maintained reasonably adequate programs for more promising candidates. As a result of the Social Security Amendments, parents became interested in establishing workshops for their mentally retarded adults living at home. Rehabilitation workers, however, did not consider mentally retarded adults to be reasonable candidates and excluded them from service. The time was not ready for social integration.

The second world war broke out. Manpower needs were so severe that many retarded persons were released from institutions to serve in the armed forces or to work in factories (Rosen, Clark & Kivitz, 1976). These individuals belied the notion that the retarded were unsafe to mingle in society and that they were unsuitable for employment.

Once again, the returning war veterans proved to be a boon for all handicapped persons because, "for the first time (i.e., after World War II), thousands of employers were learning that ability was what they were seeking in their workers and that disability need not be a bar to successful performance" (Obermann, 1965, p. 289). A greatly expanded definition of appropriate rehabilitation services resulted from the Vocational Rehabilitation Act Amendments of 1943. Now any services necessary to render a disabled individual fit to engage in a remunerative occupation were acceptable.

Treatment of the mentally retarded also improved as a result of this legislation. For the first time the mentally ill and mentally retarded "could" be accepted as rehabilitation clients. Previously, these two groups were excluded as unsuitable. Postwar years, unfortunately, found the emphasis in rehabilitation on body counts and cost effectiveness. The goal was to place the most persons into the most jobs at the least cost to the public. The result was a tendency to accept people with simple rehabilitation problems and to ignore the severely disabled, including the retarded.

On another front, The National Industries for the Blind (NIB) became increasingly active during the 1940's. The NIB was originally established to provide technical assistance to workshops for the blind (U. S. Department of Labor, Note 1). Spurred on by the ideals expressed by the Wagner O'Day Act and caught up in the spirit of patriotism brought on by war, the NIB began to expand. During this period, sheltered workshops solicited jobs from national chain stores and industrial customers. Another expansion occurred when door-to-door sales teams were formed to peddle workshop products. Thus, big business was finally coming to the sheltered workshop. The blind at least, were beginning to be socially integrated. Their workshops were beginning to compete with other factories in the marketplace. Most other workshops, however, retained the mission(s) of social service or charity. Work continued to be considered as therapy for people who could never realistically support themselves.

The 1950's were relatively quiet, legislatively speaking. The only legislation of note occurred in 1954 when the Vocational Rehabilitation Act was again amended. With these amendments, federally funded research and demonstration projects were authorized. This legislation, probably more than any other piece of legislation in the previous 40 years, spurred the growth of workshops for the mentally retarded. Prior to its passage in 1954, six workshops for the retarded were operating in the United States. By 1957, this number had exploded to 108 workshops. In the first ten years following the passage of the 1954 Amendments, 151 grants were made to programs for the mentally retarded (Nelson, 1971). It must be noted, however, that these grants only provided start-up monies, and it was up to the individual states to provide permanent (albeit partial) support for workshops.

Parents must receive the majority of the credit for establishing and administering the first workshops expressly for the mentally retarded. In the early 1930's, some parents of the mentally retarded and cerebral palsied attempted unsucessfully to enter their children in vocational education and vocational rehabilitation programs. Although these programs claimed to help the handicapped, the parents found that their children were rejected. Such rejection was not entirely unexpected. Previously, these parents had banded together to provide educational programs for their progeny who had been rejected by the public schools.

The Vocational Rehabilitation Act was revised in the mid-forties to permit services to mentally retarded persons by state rehabilitation agencies; however, little impact was felt in workshops. During the 1950's parents organized programs through their local associations for Retarded Citizens (NARC) and United Cerebral Palsy (UCP) groups to provide services for their adult handicapped. Many of these programs eventually developed into sheltered workshops (U. S. Department of Labor, Note 1).

NARC workshops exhibited much greater variability in objectives and services than other workshops, due primarily to the range of needs evidenced by the mentally retarded clients for social, recreational and daily living as well as for vocational training. Because parents operated many of the early workshops, they were viewed as extensions of school programs; hence academic and social skills were emphasized. According to Nelson (1971), "The purpose of the work was to develop social skills, to provide recreation, or to occupy enrollees when they were not being taught needed living skills" (p. 327). Unfortunately, this attitude is still apparent today in many workshops and work activity centers.

Two additional trends emerged during the 1950's. These were on-the-job training (OJT) and public school vocational training programs. Although OJT has always been a part of vocational rehabilitation programs, large scale use of this technique was not attempted until the late 1950's. The prototype for OJT can be attributed to Joseph Clunk, who perfected practical demonstration methods for convincing employers to hire blind workers during the 1930's (Koestler, 1976). Clunk used three techniques. First, he demonstrated that the blind could perform certain jobs by forming a cadre of successfully placed blind workers to be exhibited as "tokens." This technique was used previously by Howe to raise money for his school at the Perkins Institute. The vaudevillian aspects of these side shows were thought to be less important than the results. The second technique used by Clunk was to have potential employers simulate blindness while completing certain tasks. When the employers found that they could perform a task while simulating blindness, they were often more willing to hire the blind. Clunk's third technique was to provide OJT through trial placements. In this instance, he accompanied the blind person to the job and trained him in the required tasks. After that person demonstrated success on the job, Clunk discontinued his assistance and, hopefully, the individual was hired on a permanent basis.

On-the-job training was applied to the handicapped in the late 1950's by the Milwaukee Jewish Educational Vocational Service (JEVS) as the basis of a demonstration and evaluation work experience program. Other examples of OJT have included training mentally retarded in forest service and in maintenance work (Nelson, 1971).

A second vocational trend for the handicapped was evident in the public schools in the fifties. By 1960, few public schools had workshops operated by special education programs. Some of these were bootleg operations in which the class sold products made in-house. Others, such as the Whittier Shop for Cerebral Palsied and the Santa Cruz Shop for the mentally retarded established paid workshops in public schools. La Grange Illinois, another forerunner of public school interest in workshop programs, established a workshop operated by special education which provided services to students 21 years old and under (Nelson, 1971).

John F. Kennedy brought concern for the problems of mental retardation into the forefront of American consciousness. Vocational Rehabilitation began developing special projects and program goals with the retarded in mind (Dean, 1972). The President's Committee on Employment of the Handicapped was established and the Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963 was passed. This act, which was largely due to the effort of concerned parents and professionals, provided federal assistance for establishing sheltered workshops for mentally retarded persons.

The Vocational Education Act of 1963 was passed, followed by the Vocational Education Amendments of 1968. The 1968 Amendments required that at least 10% of all vocational education money be set aside to include physically, mentally and emotionally handicapped in special vocational education programs and services, thereby mandating vocational education for all the handicapped.

In 1965, the Vocational Rehabilitation Act was amended once again--further benefiting the handicapped. One result of these amendments was to extend the evaluation period for any client to a maximum of six months and up to 18 months for diagnostic services. The ultimate result of these amendments was to spur an unprecedented growth in the quality and quantity of sheltered workshops. Through these amendments, the government also attempted to influence sheltered workshops to concentrate on their original goals of training for competitive employment rather than providing long-term employment opportunities (U. S. Department of Labor, Note 1).

Work activities centers were established as a result of the Fair Labor Standards Act Amendments of 1966. These amendments also placed a statutory floor of 50% of the minimum wage for people in sheltered workshops and a requirement for payment of wages commensurate to those paid nonhandicapped workers in industry. Minimum wage exemptions, however, were allowed for those in work evaluation or training and for clients of work activity centers whose physical or mental impairment was so severe as to make their productive capacity inconsequential. For the first time, Congress recognized the need for therapeutic programs for persons with little productive capacity. Thus a new category of facility, the Work Activities Center, was established although, contrary to its title, the center was intended for activities--not for work.

History

Special attention to the problems of the mentally retarded were readily apparent in the provisions of the 1968 Vocational Amendments. A number of modifications in services were called for and new services allowed. Major provisions included demonstrations of new techniques and methods, initiation of new services, expansion of services to mentally retarded persons with special problems, training of personnel, extension of services to rural and poverty areas and the establishment of special facilities and services for diagnosis, treatment and training or care of the mentally retarded.

Another notable event of 1968 was the establishment of the Commission on Accreditation of Rehabilitation Facilities. This commission formalized the place of rehabilitation centers and workshops within the rehabilitation field (Dean, 1972). More importantly, it developed a procedure for evaluating and certifying workshops to ensure that they comply with all federal and state statutes and that they provide the highest quality of services, both vocational and therapeutic, for workshop clients.

Thus, at the close of the 1960's, when the civil rights movement was at its peak and civil disobedience had increased among the populace, the government was heavily committed to workshops for the mentally retarded. They had assumed responsibility for vocational habilitation as well as rehabilitation. The severely retarded and those who had been previously excluded from vocational training were now considered acceptable candidates. Federal money had a three-fold effect on workshops. First, many multidisciplinary shops began to serve large numbers of moderately retarded. Second, some workshops for the mentally retarded began to expand their admittance criteria and accept persons with other disabilities. Finally, parents were no longer totally responsible for the programs offered in workshops. They abdicated in favor of professionals with industrial and rehabilitative training.

Then came the Rehabilitation Act of 1973 and more than 50 years of practice in the rehabilitation field was reversed. This Act affected the field of vocational rehabilitation as much as PL 94-142 has affected special education. The major provisions of the Rehabilitation Act of 1973 are as follows:

1. Special emphasis must be placed on serving and rehabilitating the severely handicapped;
2. An extensive evaluation of the vocational potential of persons with severe or multiple handicaps must be undertaken to determine which program would best serve their disability;
3. A comprehensive written rehabilitation plan must be developed for the client, taking into account his vocational potential and his physical and/or mental limitations;
4. Intensive efforts must be made to place the severely handicapped in remunerative positions; and
5. Extensive follow-up services must be made after placement to assure success of rehabilitation.

The Rehabilitation Act also contained a provision, Section 504, which has had far-reaching effects. This provision states: "No otherwise qualified handicapped individual in the United States shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance".

Thus, with the stroke of a pen, the field of vocational rehabilitation was revolutionalized. According to Laski

(1979), "The systematic exclusion of severely handicapped from rehabilitative services on the basis that they have no vocational potential is as unsupportive as the proposition that mentally retarded children cannot benefit from education" (p. 16). From waiting patiently at the end of the line, the most severely handicapped found themselves pushed to the head. The concepts of "susceptibility to rehabilitation" or "feasibility for rehabilitation" suddenly were unacceptable as standards for receiving services.

It would not be an exaggeration to state that the Rehabilitation Act of 1973 has had and will continue to have "significant implications for improving services to the mentally retarded" (Brolin, 1976, p. 46). The degree of impact resulting from this act is illustrated by the increase in population served in workshops. Between 1968 and 1977, the population of workshops increased by 300%, from 39,524 to 156,475 persons (Whitehead, 1979). Although this growth appears impressive, Whitehead cautions us to note that work activity centers grew by 614% while regular workshops grew by 84%. Therefore, the increased opportunities appear to be located in work activities centers with their emphasis placed on warehousing the "inconsequential producers" rather than in providing meaningful vocational training activities.

CONCLUDING REMARKS

Howe's workshop at the Perkins Institute, like all other workshops before and after, was founded on noble principles but floundered on everyday practicalities. Howe failed to achieve his goal of competitive employment for the blind not because he did not have the technology to teach valuable skills and not because his students did not have the capability to learn acceptable trades. Rather, he failed because he did not provide the necessary support mechanisms which would have increased the probability that his clients would enter and remain in competitive employment.

Three major factors contributed to the failure of the workshop at the Perkins Institute according to tenBroek and Matson (1959). First, the public had not been adequately prepared to receive the blind as co-workers or employees. Second, no systematic placement methods were devised to locate and place clients within industry. Third, there was no attempt to gauge employment opportunities and to train clients for specific jobs. The inevitable result was that the Perkins workshop became a long-term employment facility. Our fear today is that despite legislative support and public interest, the fate of handicapped clients will be similar to that experienced by Howe's 150 years ago. Perhaps we can learn from Samuel Gridley Howe's misfortunes!

According to Oberman (1965),

> The basic difference between the Vocational Rehabilitation Acts of 1935 and 1965 is not the difference in millions of dollars in appropriations, it is not the difference in techniques and procedures, it is the difference in the public and professional attitudes towards disability and towards the rights and potentialities of disabled persons. (p. 266)

This statement is equally applicable today. Since the establishment of the first workshops for the blind by Hauy in 1784 and since the first federal legislation for the vocational habilitation of the disabled in 1916, a steady progression has been noted in the public's acceptance of the handicapped as full-fledged members of society capable of contributing in a meaningful fashion. In order to ensure continued support for vocational habilitation efforts, the campaign of public education and awareness must continue.

Concurrently, effort must continue to be directed toward developing and improving models for training and placing clients in competitive jobs. Many professionals are actively involved in model development. A number of these models are represented in the present volume. These models, however, must be combined into a complete continuum of vocational training activities. Such a continuum might begin in the public school with prevocational classrooms intended to teach basic skills. The next level would be a transitional workshop in which public school and local sheltered workshop professionals join forces to introduce the handicapped to remunerative work experiences. The third and fourth levels of the continuum would provide for progressively longer work days and more difficult vocational tasks. Finally, the client would move to a competitive employment site and the vocational trainer would retain minimal contact (Hansen, Note 2). Through the concept of a vocational continuum, each individual would be permitted to receive training in the least restrictive vocational setting appropriate and would be allowed to progress at his or her own individual rate.

The ultimate goal for all handicapped persons should be competitive employment and economic independence (Whitehead, 1979). This goal can only be achieved through identifying appropriate skills for training and through appropriate training opportunities (Mithaug & Haring, 1977). This is not to advocate a return to the early twentieth century concept of "the right man for the right job". In contrast, it means that the job market should be carefully analyzed and compared to the potential skills of the handicapped individual in order to identify those jobs which have the greatest probability of success. In this manner, the problem of training clients for jobs not needed or wanted by industry can be alleviated.

In conclusion, we can optimistically state that the light at the end of the tunnel does indeed grow progressively brighter. The best advice comes from Rosen, Clark and Kivitz (1976):

Each generation painfully confronts and somehow copes with the same dilemmas. Previous solutions no longer seem acceptable in retrospect. The challenge remains, as it has always been, to advance our knowledge and understanding of mental retardation, to encourage innovative efforts on behalf of mentally retarded citizens, to distinguish between useful innovations and the clever packaging of older, outworn policies and programs and to promote human welfare for the mentally handicapped no less than we would for any other group of citizens (p. 434).

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Vocational Programming for the Severe and Profound in the Public Schools

Al Lynch
Tracy R.A. Singer

Public secondary schools in America typically provide youths with the opportunities to learn skills which will be useful in their adult lives. Some high school students may be preparing for college-level work; others view high school as a time to learn a useful vocational trade. For the handicapped learner, acquiring relevant job skills in high school may be the significant difference between successful job placement and unemployment.

Yet the schools have not traditionally embraced the responsibility to provide handicapped students with appropriate vocational skills. The more severely handicapped individuals have often been excluded from public schools altogether on the grounds that they cannot learn. A recent report by the National Association of the State Boards of Education (1979) claims that there is a "perceived decline" in handicapped students who are receiving special education services at the secondary level and that there are "severe shortages" of teachers with training in both special education and vocational education. The report goes on to note that there are limited vocational education programs, service delivery options, and funding bases for the handicapped.

The situation is more hopeful, however, than this report suggests. First, passage of such key legislation as Public Law 94-142, the 1976 Vocational Education Act Amendments to Public Law 94-482, and Section 504 of the Rehabilitation Act of 1973 has armed parents and other proponents of job training for the handicapped with the legal power to force the schools to be more responsible. More is being written which advocates appropriate vocational education for all students in the public high schools. More federal and state dollars are being funneled into research, demonstration, and personnel preparation programs; results from those innovative programs are being widely published and replicated.

Still, the severely and profoundly handicapped students have been neglected when talk turns to vocational education. The belief still persists that these individuals cannot learn even the most rudimentary jobs. Yet a handful of research programs has demonstrated that even this population can learn simple assembly tasks if the instructor knows how to arrange the learning environment to promote acquisition of skills. For instance, Gold (1972) has demonstrated that severely handicapped persons can learn relatively complex assembly tasks, such as putting together a 15-piece bicycle brake.

This means that the special educator who works with severely handicapped young adults in secondary school job-training programs must have some sophisticated skills. He or she must be sensitive to real and potential job opportunities in the community and must coordinate with sheltered workshop and other potential employers. He or she must be able to work with an interdisciplinary educational team and must design appropriately sequenced programs for each student leading to eventual job placement. Finally, the teacher must be responsible for placing new clients on the job and providing transitional training and support to ensure their adjustment to the workshop.

Vocational Programming in Public Schools

Much of the research conducted on learning abilities of the severely and profoundly handicapped has concentrated on community-based special programs, often conducted at the site of the client's eventual placement. But there are a few public school-based programs in operation which have successfully prepared the severe and profound for sheltered workshops and similar employment.

This paper will review the many tasks involved in operating a school-based prevocational program for the severely and profoundly handicapped, and then discuss one model developed at Wilson-Pacific School in Seattle, Washington.

ASSESSMENT

Assessing the Job Market

The special educator must survey the existing job market for his or her students and must assess student interests and abilities before teaching can begin. Two categories of assessment are considered: job and student abilities.

The first step in establishing any vocational preparation program for the severely handicapped is to accurately assess the placements which will be possible after training. The teacher should know about present work sites, the changing job market, and the possibilities of restructuring existing jobs for more severely handicapped employees.

Graduates of regular vocational education programs are launched into the job market knowing that their skills have prepared them for a variety of related positions. Thus, their teachers need not worry about the exact nature of work the students will perform on the job, nor need they inquire about where that job will be or under what conditions the work will be performed. Because the severely handicapped student learns slowly and can be prepared for only a limited number of positions, however, it is essential that the special education teacher know what jobs will exist in the community after training so precise skills can be taught.

This knowledge means contacting public and private service agencies to determine exactly what sheltered workshops or other programs currently accept severely handicapped workers. The teacher should visit each potential placement site to discover what work it performs and what the procedures are for client placement. He should learn answers to several questions, including: what entering skills or behaviors are essential for acceptance into the program; whether the work is presently within the learning capabilities of the severely handicapped; what life skills (e.g., traveling to and from work, etc.) are necessary, and what amount of supervision clients receive.

Several recent studies have surveyed workshop employers to discover what they demand of new employees. Suprisingly, the majority of supervisors want clients to have good social skills. Grantham (1977) identified 47 basic behaviors required for successful client placement, including personal, interpersonal, and specific job skills. The ten most important skills identified by employers were all related to acceptable social behaviors. In fact, the first true occupational skill was ranked 36th in importance. Table 1 lists ten behavioral standards generally considered to be survival skills by workshop supervisors for sheltered workshop employment (Rusch & Mithaug, 1980). Again, the emphasis is on personal skills and good work habits, rather than on specific job-related functions.

With the certain knowledge that social skills must be developed, the special education teacher can concentrate

TABLE 1

BEHAVIOR STANDARDS IN VOCATIONAL SURVIVAL SKILLS SELECTED FOR ENTRY BY 90% OR MORE OF SUPERVISORS

Employees Should Be Able To:

1. Participate in work environments for 6-hour periods
2. Move safely about the shop by:
    a. Walking from place to place
    b. Identifying and avoiding dangerous areas
    c. Wearing safe work clothing
3. Work continuously at a job station for 1-2 hour periods
4. Learn new tasks when the supervisor explains by modeling
5. Come to work on an average of 5 times per week
6. Correct work on a task after the second correction
7. Want to work for money/sense of accomplishment
8. Understand work routine by not displaying disruptive behavior during routine program changes
9. Continue work without disruptions when:
    a. Supervisor is observing
    b. Fellow worker is observing
    c. Stranger is observing
10. Adapt to new work environment with normal levels of productivity in 1-5 days and with normal levels of contacts with supervisor in 30-60 minutes.

NOTE. From Vocational Training for Mentally Retarded Adults: A Behavioral Approach. 1980 (p. 115) by F. R. Rusch & D. E. Mithaug. Reprinted with permission from Research Press, Champaign, IL.

on discovering exactly how a particular workshop functions, the kinds of tasks performed and the supervisor-client ratios. All of these variables will influence the secondary school training program.

The teacher must monitor changing events in both the recent literature and in the community to ensure that appropriate positions are available in the months and years ahead. In the local community, economic, social and political factors may force changes in the number of workshops and the demand for particular occupations. Involving potential employers on community or school task forces should provide relevant input for designing new work programs for the severely handicapped and help them see which skills students are already capable of learning. Also, employers with federal government contracts are obliged to have affirmative action policies. Stereotypes of the severely handicapped are not easily dispelled, but the number of employment settings for them is increasing as is the variety of occupations within their reach.

Assessing Student Abilities

Once the special education teacher has assessed the potential job market, he or she must attempt to match those occupations with student interests and aptitudes. Although most students will be non-verbal or will have such limited communication skills that they cannot express an opinion regarding vocational choice, it remains important to attempt to discover what activities the student likes best. Finding a satisfying vocation is important for everyone; like other students, the handicapped learner will work better and longer on enjoyable tasks. Parents should also be consulted regarding their desires for the eventual career of their child. For example, if parents strenuously object to training for janitorial work, then the teacher should consider that occupation as a less successful program option for the student.

Of course, student aptitude is of more import than student interest; thus a student with severe motor impairment will not be a good candidate for a food service worker program. Crowner (1977) identified three variables that should influence assessment: student age, ability, and need. The older the individual, the less time there will be to provide school-based training; hence, more emphasis is needed on learning specific occupational jobs. The student's ability will determine the setting in which the assessments will occur, whether it be in the home, at school, or in a workshop setting. Individual needs will also dictate the assessment outcome, because a student may have behavioral or other problems which will impact the eventual job site. For instance, severe visual impairment will limit the situations open to a student unless adaptations are considered.

One of the most effective ways to determine how a student will perform certain jobs is to expose him to several occupations during the assessment phase. The simplest method is to take the student to workshops, to show films and pictures, and to discuss different jobs. This helps the student become aware of options; but since the student is rarely engaged in trying out the jobs, the teacher cannot form a judgment about aptitude, only interest.

Brown, Bellamy, and Sontag (1971) and Lynch (1979) advocate public school-based simulated workshops. Developing such sites in the schools allows students to participate actively in mock on-the-job training. The teacher can then observe realistic job behaviors and responses and make informed training decisions. This workshop method may not closely simulate real tasks in future work settings all the time, but it does inform the teacher about some general work traits and interests.

The Educational Team

It is essential to involve parents and other professionals in the education of the severely handicapped. The expertise of occupational and physical therapists, language clinicians, social workers, and others is necessary to assess the student thoroughly. The interdisciplinary educational team will jointly decide what occupations the student is best able to learn. The team will also provide direct services to the student and advise the teacher as he or she programs for learning. Crowner (1977) offers four assessment strategies the team should consider: 1) determine specific activities for the student to be utilized by all team members in their observations; 2) decide before assessment begins who will collect what information to avoid overlap; 3) decide how assessment information will be collected; and 4) ensure that at least two team members agree on each assessment decision. The team should collect data on gross and fine motor, language, cognitive and affective domains, and on stamina and medical status. Data should include facts about rate, endurance, and quality of performance in both a single situation and across different situations.

A final word about assessing student skills to determine training options: vocational training for the severely or profoundly handicapped adolescent will often lead to sheltered workshop employment. It is, however, important to remember that there is wide variation among even these students. Educators, parents and others must be realistic, yet optimistic about the placements available to individuals.

STUDENT PROGRAMMING

Armed with a knowledge of the potential job placements available to students after training, and with adequate information regarding student interests and abilities, the teacher and other team members are ready to begin designing a program to ensure eventual employment. This program should include an IEP which specifies long-term and short-term objectives, measurement procedures and analyses of instructional tasks.

Long-Term Objective

Exit skills from the secondary school program must coincide with entry level skills required by workshops and other work sites. For instance, if an assembly line operation requires the client to work without a break for one hour at a time with no more than one cue to return to work, then the student's long-range goals must include that behavior. Continuing with the example, if the student can remain seated and on task for no more than three minutes at a time with several prompts to remain working, then the difference between entry- and exit-level behavior is clear, if vast.

Another way to define long-range goals is advocated by Bellamy, Wilson, Alder, and Clarke (1978), who suggest the identification of a skill area, and a set of responses "which achieve a defined functional effect when it is performed in the appropriate situation" (p. 14). Teaching skill areas such as "mechanical fastening with tools" provides the flexibility that training for a specific job cannot; thus, a client could use his mechanical fastening skills in a variety of settings. This ability, in turn, will make the client more employable. Figure 1 illustrates the identification of a single skill area which could form the basis for a long-range goal.

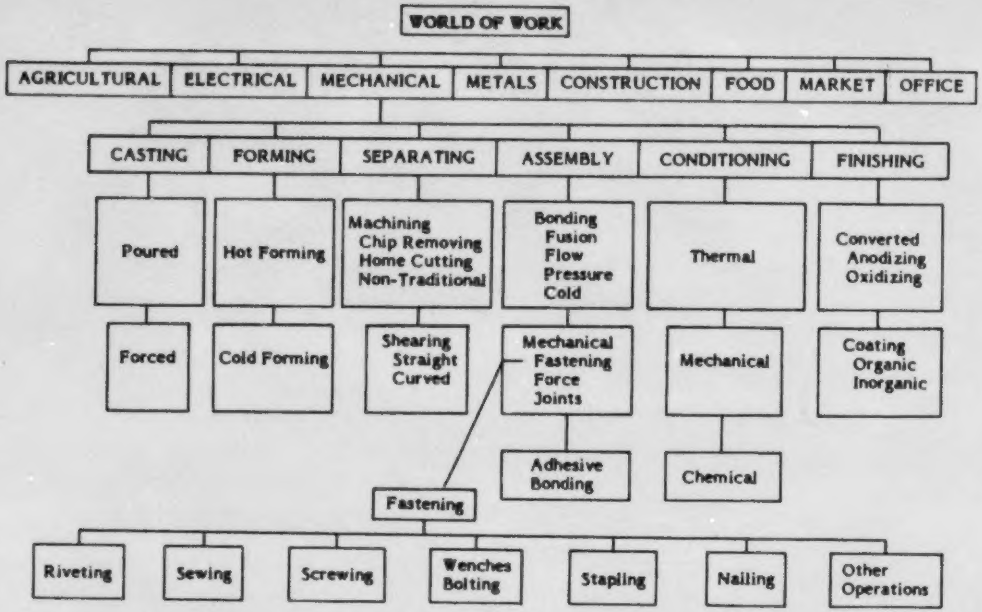
WORLD OF WORK
AGRICULTURAL
ELECTRICAL
MECHANICAL
METALS
CONSTRUCTION
FOOD
MARKET
OFFICE
CASTING
FORMING
SEPARATING
ASSEMBLY
CONDITIONING
FINISHING
Poured
Hot Forming
Machining
Chip Removing
Home Cutting
Non-Traditional
Bonding
Fusion
Flow
Pressure
Cold
Thermal
Converted
Anodizing
Oxidizing
Forced
Cold Forming
Shearing
Straight
Curved
Mechanical
Fastening
Force
Joints
Mechanical
Coating
Organic
Inorganic
Adhesive
Bonding
Chemical
Fastening
Riveting
Sewing
Screwing
Wenches
Bolting
Stapling
Nailing
Other
Operations

Figure 1: An Illustration of the World of Work Divided into Skill Areas

NOTE. Adapted from G. T. Bellamy, D. Wilson, E. Alder, & J. Clarke. A strategy for programming vocational skills for severely handicapped youth. 1978 (p. 27). Reprinted with permission from senior author.

Short-Term Objectives

Once the team has identified the appropriate terminal skills and behaviors for each student, it must determine what relevant tasks must be taught to achieve exit-level goals. Objectives should relate to specific work skills (e.g., assembling a pulley), behavioral skills (e.g., working for long periods of time without reinforcement), and personal skills (e.g., basic hygiene). The inclusion of occupational objectives on this IEP is the significant difference from those written for younger handicapped children, where social and academic goals generally take precedence. Again, the older the student (and thus the less time before school termination), the more directed must be teacher efforts to prepare the student vocationally.

All IEPs should include information about effective reinforcers which will promote continued successful learning in the classroom and which can generalize to the workshop setting. Often, a token reinforcement system is used, where coins or script can be exchanged for food or free time. The schedules of reinforcement must also be designed so that they eventually parallel those in the work environment by the time the student is ready for placement. In the classroom, a student may be rewarded after completing one multistep task, such as assembling six or more sifters, before reinforcement. The frequent "pay-offs" used in the classroom to promote acquisition and proficiency must be modified, reduced and ideally eliminated.

Measurement

The IEP should include criteria for attaining each objective. The special educator must record student performance data on a regular, preferably daily, basis.

60

Daily data collection ensures that the student is not moved on to the next level task too soon, nor held back too long. Data tell the teacher when to "slice back" a program that is not succeeding and when to modify ineffective teaching strategies.

Task Analysis

The more severely impaired a student's learning ability, the more often the special education teacher must reduce tasks further into subtasks. He or she then teaches each subtask in a sequence which will lead to acquisition of the entire skill. The assembly task in Table 2 contains 32 separate activities which must be performed in a certain order. The first movement is to pick up a bolt; the second movement is to pick up a washer, and so on until the assembly is complete and the student raises his or her hand to have the work checked. In the section on the Wilson-Pacific School model will be a description of how work-related skills are taught. Because most skills taught to the severely handicapped must be broken down so finely, it is important to make informed decisions about prevocational tasks that lead to employment. Constantly analyzing tasks also helps the teacher find new ways to teach difficult skills.

PREPARING THE JOB SITE

In 1972, a study commissioned by the Department of Health, Education, and Welfare reported that existing occupational preparation programs for the handicapped often failed because the environment was not as well prepared for the client as the client was for the job

TABLE 2

TASK ANALYSIS OF A 17-PIECE TRANE HERMATIC ASSEMBLY

Step	Instructional Cue	Student Response
1.	s at work station attending	pick up bolt
2.	bolt in hand	pick up washer
3.	washer in hand	put washer on bolt
4.	washer on bolt	pick up rubber washer on bolt
5.	rubber washer in hand	put rubber washer on bolt
6.	rubber washer on bolt	pick up metal cap washer
7.	metal cap washer in hand	put metal cap washer on bolt flat side down
8.	metal cap on bolt	pick up hat shaped cover
9.	hat shaped cover in hand	put hat shaped cover on bolt upside down
10.	hat shaped cover on bolt	pick up spring
11.	spring in hand	place spring on bolt
12.	spring in bolt	pick up slotted stem
13.	slotted stem in hand	place slotted stem on bolt
14.	slotted stem on bolt	tighten slotted stem securely
15.	slotted stem secure	pick up body
16.	body in hand	place slotted stem assembly into body
17.	slotted stem assembly in body	place body on table
18.	body on table	pick up wing
19.	wing in hand	place wing in slot thick side out
20.	wing in slot	repeat 18&19 until slots are filled
21.	steps 18&19 repeated	pick up heavy metal plate
22.	heavy metal plate in hand	place metal plate on top of stem assembly
23.	heavy metal plate placed	pick up cap
24.	cap in hand	pick up threaded stem
25.	threaded stem in hand	put stem in hole from bottom
26.	threaded stem secure	pick up small cap stem
27.	small cap stem in hole	put cap stem in hole inside of cap
28.	small cap stem in hole	pick up thin plate
29.	thin plate in hand	place plate inside of cap indented side down
30.	thin plate in cap	place cap assembly onto body
31.	cap assembly on body	tighten cap assembly onto body
32.	cap assembly secure	place finished product in place
33.	finished product placed	repeat sequence

environment, nor were services or groups outside the immediate administration of the program adequately used.

The special education teacher should maintain contact with the workshop supervisor through the school year to monitor changing conditions in the work site which might impact on the employability, and hence the training program, of the secondary student. As the student nears attainment of his or her goals, the teacher must begin preparing the job site and the potential supervisor.

Workshop personnel seldom conduct extensive on-the-job training of new employees. Table 1 focused on skills that supervisors consider most important for entry into sheltered workshops, many of which are behavioral skills. Often their supervisor-client ratios are too high for much individualized attention; therefore, they look for clients who enter with certain kinds of skills. Thus, the burden for continuing the student's training after job placement falls invariably on the teacher. The teacher should arrange for continued supervision until the student can work on tasks as independently and as quickly as other workers. Until that time, too, the employer will not remunerate the client, leaving financial responsibility up to the school or other agency.

Clarke, Greenwood, Abramowitz, and Bellamy (1979) describe three objectives for on-the-job supervision: 1) to facilitate acquisition of appropriate work skills; 2) to maximize independent performance; and 3) to monitor appropriate social and general work behaviors of the client. Either the teacher will be directly involved in the supervision of the student in the job setting, or he must direct someone else -- a practicum teacher or aide -- in monitoring client performance. The teacher must facilitate the acceptance of the client on the job and help him or her to function appropriately.

Just as data collection in the classroom was important to monitor student progress toward meeting objectives, so too is it essential during this transition phase. The teacher must have accurate data on client performance in order to continue training or to retrain as necessary. Data collection also tells the teacher when the client is ready to work independently, without transition staff supervision.

When the client is working independently, the teacher should continue to maintain contact with the workshop supervisor to monitor client's performance. At all times, the teacher should be willing and able to re-enter the workshop to provide updated training to the client and technical assistance to the workshop supervisor. Sometimes the teacher must be creative in solving problems. In one case, a profoundly retarded client was not performing at a satisfactory rate in a sheltered workshop. The special education teacher suggested that the young man's mother send fifty cents in pennies to work with him each day. These pennies were doled out to him throughout the day. This solution cost the workshop staff nothing and took little time, but it increased the client's performance rate and enabled him to meet production schedules.

THE WILSON-PACIFIC SCHOOL MODEL

In 1977, the Washington Office of the Superintendent of Public Instruction and the Seattle School District were awarded a contract from the Bureau of Education for the Handicapped (now called the Office of Special Education) to develop a model school program for severely and profoundly handicapped adolescents leading to placement in community workshop and living settings. During the past three years, the staff have developed a school program, coordinated with community agencies, and begun placing students in the community to continue building their skills. Three other school districts have begun adapting the model process.

The Setting

The program is housed at Wilson-Pacific School in Seattle, a special junior-senior high school for mentally handicapped students. One school wing has been assigned to the program, including three classrooms, one production center, a combination occupational therapy/physical education room, a home living class with kitchen and beds, and a laundry/bathroom complex.

Each of the three classrooms is divided into activity areas; each contains a separate "work area" where virtually all the classroom-based prevocational training takes place, in order to reinforce the difference between "work" and "school." The production center is called a "shop" for the same reason. The shop is set up as a simulated sheltered workshop, with a variety of tasks and a supervisor-student ratio of 1:10. There are 20 work stations -- 16 for assembly and 4 for disassembly -- two parts and tray storage areas, and a staff work area. The room also contains a small free-time area and a time-out area.

The three classrooms are staffed by a master teacher, two aides, and the part-time services of support professionals, such as an occupational therapist, and a communications disorders specialist. The production center manager also has aides. To assist in the community transition, the program has a Community Liaison Specialist and a Family Program Specialist. The former is responsible for coordination with workshops and client placement; the latter coordinates with students' families and home living sites within the community.

Surveying Community Resources

The Community Liaison Specialist surveyed the Seattle-King County area to determine what community work placements were able and willing to accept severely handicapped clients. He identified and contacted 32 sites such as sheltered workshops and work activity centers, and asked each to complete questionnaires which provided him with information about behavior admission requirements and administration. Some programs, for instance, required clients to have such self-help skills as toileting; others wanted a certain level of receptive and expressive language to facilitate training on the job. Twelve programs were found to be acceptable for placement of program "graduates."

Designing the School Program

The prevocational curriculum consisted of four stages of training: 1) specific skills acquisition -- accomplished in the regular classroom; 2) work habits training --conducted in the production center; 3) on-site trial placement; and 4) training and final placement --practiced in the community work site. In Washington state, the Department of Social and Health Services (DSHS) provides funds for adult (21 years and over) handicapped persons who are employed in sheltered workshops and other vocational settings. Therefore, only students 20 and 21 years old are involved in the trial and final placement levels of the program.

Each student's school program is a careful mixture of age-appropriate academic and preacademic tasks, self-help and home living skills, and work-related skill training. The following six training program levels were identified. They reflect the increasing emphasis on vocational preparation:

1. High priority self-care and communication skills, lower priority prevocational prerequisite skills (in classroom setting).
2. Prevocational training (acquisition) as a program priority (classroom setting).
3. Participation in vocational production with continuing prevocational training (production center and classroom settings).
4. Full participation in vocational production center with at least two regularly performed production jobs (mostly production center, some time in classroom).
5. Trial placement in a target facility with support from Community Liaison staff (in community setting); and
6. Final placement in target facility with follow-up support (in community setting).

Thus, the movement of students is from basic self-care and communication training to vocational training within the school setting, and then to placement in community settings for continued training and final placement. Younger students (ages 13-16) are less likely to be involved in levels 4, 5, and 6. Older students who are approaching the end of their school careers and who will soon be eligible for DSHS funding will receive increased prevocational training.

Assessing Students

Once the educational team knew the types of placements available for students after their school program terminated, it developed a curriculum plan for each student to meet the entry requirements of the workshop setting deemed most appropriate. Each student was assessed on three measures: the Uniform Performance Assessment System (UPAS) (White, Edgar, Haring, 1978), the Prevocational Assessment and Curriculum Guide (PACG) (Mithaug, Mar, & Stewart 1978), and the Progress Assessment Chart of Social Development (P-A-C) (Gunzburg, 1973). UPAS is a curriculum-referenced assessment instrument which measures preacademic, gross and fine motor, communication, social, and self-help skills; the PACG measures prevocational readiness and capabilities of the severely handicapped; and the P-A-C is a tool used by the State of Washington to measure social, personal, and self-help skills in DSHS-eligible handicapped individuals.

Placing Students in the Curriculum

Most students begin their prevocational training in the classroom, then move into the production center for increasing lengths of time as their skills improve. Fifteen prevocational tasks have been identified as skills actually performed in local sheltered workshops, or which simulate certain skills of value in many settings, such as the use of a screwdriver. The training procedures utilized in the school-based program are adaptations of task design, task analysis, and training techniques used by such programs as the Special Training Program in Eugene, Oregon, and the Experimental Education Unit in Seattle, Washington. The procedures focus on increasing the student's ability to perform a complicated task independently. Progress is measured in terms of percentage of steps (of the task analysis) completed without assistance. This information is recorded on a data sheet. Level of performance (with assistance, independently, etc.) is marked in the appropriate box. Total performance on the task is then graphed on the data sheet itself to provide an easy visual check of the training trend. When a student has reached criteria on a classroom-based prevocational task (usually three consecutive days at 90% independence or greater), the student moves into the production center to improve work-related behaviors.

Transitioning into Community Settings

As a student reaches age 21 -- when he or she must leave public school -- and as his or her skills increase, more time (up to a maximum of two hours per day) will be spent in the production center under a supervision ratio of 2:20. At this point, the client is ready for the transition into a work site.

The educational team determines the trial placement site by considering several variables: skills the student has mastered, parents' desires for placement, work performed at the site, distance to the site, receptiveness of workshop staff, and funding considerations. Once a decision is reached, the student's school program is modified so that he or she is concentrating on specific skills necessary for the move, such as using public transportation, building an appropriate receptive and expressive vocabulary, and, of course, receiving instruction on assembling specific products manufactured at the site.

The Community Liaison Specialist and the workshop staff agree to bring the student in to the work site for two hours a day, twice a week. For the next two to three months, the Community Liaison Specialist helps the client acclimate to the work routine and eases the transition into the eventual 30-hour week usual in sheltered workshops in the area (6 hours/5 days per week). If the client has problems with any aspect of the job, the specialist is there to help him learn to handle them, whether it be taking a bus to work, getting along with fellow workers, or increasing the time on task without reinforcement. The specialist also helps the workshop staff adjust to the new client.

After the first three months the client is generally working at a level that permits the specialist to gradually phase out. The supervisor and the specialist decide when to make the placement final. After that, the specialist maintains daily contact with the supervisor for another two weeks, after which contact tapers to weekly. After three months into the final placement, he may call or visit periodically. At all times, the Community Liaison Specialist or an aide is available to answer supervisor questions, or to provide training if the client's performance is unsatisfactory.

Results of the Wilson-Pacific Model

The combination of school- and workshop-based training has proved successful in this model program. In the school setting, students have acquired many basic prevocational skills and related work habits. Of the 34 individuals enrolled in the school program over the course of the three-year project, all but one made significant gains in the school-related tasks. Approximately 70% of the students in the production center showed measurable improvement in on-task performance.

By the end of the project, 12 students had become involved in the community-based trial placement-final placement process in seven sites. Two of the students placed during the first year did not have the opportunity to participate fully in the school-based components, but, since they were nearing age 21, they were accelerated into trial placements. One subsequently failed his trial placement due to behavior problems related to independent use of public transportation. Two students who were in trial placements when the project terminated are still in the process of final placement.

Conclusion

The training techniques (e.g., task analysis, schedules of reinforcement, movement into a "shop" setting, etc.) utilized in the school program have been successful in teaching a variety of vocational tasks to severely handicapped youths. It is also clear that the Educational Team approach, surveys of potential community placements, and trial placements can be useful processes in a joint school-community training program. A high percentage of program graduates are proving successful in post-school placements.

The local schools can meet an important need in the difficult process of preparing severely handicapped young people to perform in workshop settings. The Wilson-Pacific School model demonstrates the workability of a joint school-community program which enhances the success of vocational opportunities for the severely handicapped by developing skills which permit clients to enter programs at a higher on-the-job training level. The schools have the expertise in acquisition training and can create a setting in which many variables can be controlled as students learn new skills. Close coordination with community placements can ensure that the training continuum is unbroken as each student moves from the school into a job setting. The public schools can and will assume their critical role in preparing the most severely handicapped students for independent and productive lives.

FUTURE DIRECTIONS

Education for the severely and profoundly handicapped has been a priority for several years. Recently, two

Requests for Proposals from the Office of Special Education have underscored the need for a new educational emphasis: school and community agency cooperation in providing older severely handicapped youths with the skills they need to function in the least restrictive community environments.

State-level support for school-based vocational programs for the handicapped is essential in order to move programs out of specially-funded federal categories and into the mainstream of services provided by local education agencies to all students. In Washington state, Dr. Frank Brouillet, State Superintendent of Public Instruction, indicated his own priorities in a speech before the Washington State Congress of Parents, Teachers, and Students on May 1, 1980, in Spokane:

> I would like to see vocational education opportunities in the '80s provided to students with handicapping conditions, particularly the 18-21 year olds whose quality of life could be immensely improved by independent or semi-independent life styles. This was mandated by the federal government under Public Law 94-142, but we are slow in responding. It is a task for the '80s....

Yet the following statistics, gathered this spring in Washington, reflect a general problem in most states. Of 64 districts responding to a questionnaire regarding vocational education services for the handicapped, only 16 had programs which included the severely handicapped. Only 21% of the districts had agreements with sheltered workshops, 18% coordinated with the Division of Vocational Rehabilitation (part of DSHS), and only 11% were involved in Division of Developmental Disabilities (another DSHS program) cooperative programs.

The need for more and better public school vocational programs for the severely handicapped is clear. In the coming years, the following three priorities must be addressed to ensure that the schools fulfill their mandate to prepare ALL students for adult life.

First, teachers must be prepared to work with severely handicapped adolescents to prepare them for least restrictive community placements. Teacher training courses must include information on how to teach vocational and life skills, how to coordinate with community agencies to facilitate client transitions, and how to monitor client adjustment to adult life in the least restrictive environment.

Second, the public schools and community agencies must build stronger ties to ensure that severely handicapped students and their families receive all necessary and appropriate services. Good cooperative relationships will facilitate the eventual transition of students into community settings, while keeping the flow of necessary services from bogging down in red tape.

Third, the public schools must take a lead role in establishing orderly and effective transitions for students leaving schools and moving into community-based vocational and home living settings. The schools are the primary educators of handicapped children, and as such they must bear the primary responsibility for making sure that those students are prepared for adult life.

Public school vocational training for the severely handicapped is working in those few programs sponsored by special grants. It is time for the effective practices developed through these model programs to be widely disseminated and adapted for use in a variety of school settings. Only then can this vital area of education for the handicapped be vigorously pursued.

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The Debilitating Effects of the Habilitation Process

Sidney M. Levy

Each year an increasing amount of this country's economic and human resources is used to improve handicapped persons' lives. Recently, particular notice has been given to the problems of the adult handicapped, a population which has long been ignored and rejected. One has only to observe the recent increases in Federal- and State-supported projects and programs, the increased professional literature in the area and the increases in presentations at professional conferences to confirm this interest. Few question the justification for this movement. Two concerns, however, are voiced: Are these attempts truly improving the quality of life for handicapped persons? and Are the benefits derived by handicapped persons and by society cost effective? The answer to both questions is no. If society is truly going to enhance the quality of handicapped persons' lives, a complete analysis of the current situation and recommendations for improvements are essential.

Out of the adult handicapped population, the moderately and severely retarded have been identified for special concern (i.e., The 1973 Rehabilitation Act, Greenleigh Associates, 1975; Bellamy, Horner & Inman, 1979;

Wehman & McLaughlin, 1980; Rusch & Mithaug, 1980). The sheltered setting (i.e., sheltered workshops, work activity centers, adult activity centers) is most frequently used to provide programs for this population. These programs were designed to provide opportunities for handicapped people to develop the job skills and social behaviors necessary for entering more normal work environments. For example, the sheltered workshop, which services most moderately and severely retarded people, is defined by the National Association of Sheltered Workshops and Homebound Programs (Note 1), as: A nonprofit rehabilitation facility utilizing individual goals, wages, supportive services, and a controlled work environment to help vocationally handicapped persons achieve or maintain maximum potential as workers.

Not only do these programs fail in their attempts to realize maximum vocational potential for the majority of their clients, but in many cases, they actually create debilitating factors, such as new inappropriate behaviors, which even further hinder the clients. The apparent failure of many habilitation programs, as evidenced by their clients' minimal movement to higher level programs (Greenleigh Associates, 1975), could result either from the limited abilities of the clients or from ineffective programs. Since the moderately and severely retarded have demonstrated a higher learning potential than was previously thought, (Gold, 1972; Bellamy, Peterson, & Close, 1975), the latter explanation seems most feasible; the ineffectiveness of these programs extends into the areas of evaluation, training, environment, productivity and organizational structure.

CRITICAL AREAS OF PROGRAM INEFFECTIVENESS

Evaluation

Prior to or upon entrance to the sheltered workshop, the handicapped person is evaluated to determine his or her functioning levels, interests, and vocational strengths and weaknesses. The results of this evaluation are used to suggest the level of training needed and the most appropriate program placement. Theoretically and practically, evaluation is a reasonable and logical approach. If the instruments used are reliable and valid and, in fact, lead to effective programming, then the evaluation process should be encouraged. The instruments and procedures currently used to evaluate the vocational potential of moderately and severely handicapped persons, however, have not been proved to be reliable or valid; furthermore, adequate training programs are seldom provided or even available.

Three categories of traditional vocational assessment instruments are intelligence tests, manual dexterity tests and work sample tasks. The effectiveness of these assessment instruments, however, is questionable. On the subject of standard tests, Patterson (1964) suggests that: "In the field of academic achievement we are perhaps better off than in any other, since the standard tests are applicable, except where there are specific speech, reading, or physical defects" (p. 132). When dealing with moderately and severely retarded persons, Patterson's exceptions include practically the entire population. The relationship of intelligence test results to job success is not clearly established (Appell, Williams, & Fishell, 1962; Meadow & Greenspan, 1961; Wagner & Hawver, 1965). In some cases (Wagner & Hawver, 1965), correlations have been found between intelligence tests (Stanford-Binet) and dexterity tests (O'Connor Finger Dexterity Test) but none has been shown to correlate highly with job success.

Indeed, the use of IQ scores to determine program placement often relegates people to inappropriate situations.

Many available jobs for the retarded worker are in the area of small bench assembly and tests for manual dexterity are considered important for job success. Again, however, the relationship of manual dexterity alone to work success is questionable, since training and experience may greatly influence an individual's performance. As Tiffin (1952) states, "A consideration of the skills demanded of the industrial tradesman or skilled machine operator indicates that the employee usually succeeds or fails in proportion to his training and general mechanical comprehension, not in proportion to his basic dexterity" (p. 126).

Another technique commonly used for vocational evaluations is the work sample task, in which a number of standardized work tasks are used in a test situation to simulate actual job conditions. What could be a more reasonable evaluation of an individual's ability to perform a task than the task itself? Unfortunately, this technique's procedural limitations can result in questionable validity. Because most rehabilitation facilities do not have the equipment, space, money or staff to provide a wide range of work samples or appropriate machinery and equipment, work samples are often poor or inaccurate representations of the actual work tasks. Although work sample tests provide closer approximations to normative work situations than other forms of evaluation, they are still not close enough; performance on a simulated job may not accurately predict performance on a real job.

Patterson (1964), after carefully surveying methods used to evaluate the vocational potential of mentally retarded persons, maintained that determining present skills or abilities is not as critical as providing training. Many persons who do not demonstrate the desired behaviors in a test situation quickly acquire them during training.

Debilitating Effects

Moreover, those persons who have been tested are generally not provided with appropriate training opportunities based on evaluation results. According to Patterson, "Too often, diagnosis, assessment or evaluation is the end, rather than the beginning of the process. Rather than testing the individual's potential, evaluation often samples inadequate training" (p. 149). Evidence to substantiate Patterson's position is provided by Gold (Note 2, 1972), Merwin (1973, 1974), and Levy (1975), who have demonstrated that severely retarded individuals, previously evaluated and deemed capable of accomplishing only the most menial, simplified tasks, can learn to perform difficult industrial tasks.

The effects of pretraining on evaluation results have been inadequately explored; the only test which provides training prior to evaluation is the Vocational Information and Evaluation Work Samples (VIEWS) test. Since traditional evaluation efforts have proved unfruitful and in many cases detrimental to individuals by precluding them from training, a new approach is not only warranted but essential. The considerable time and money currently spent on evaluating the retarded has not clearly resulted in beneficial change for that population: therefore, resources need to be reallocated towards activities proved to result in beneficial change (i.e., systematic training). Only when evaluation is proved to be advantageous to handicapped people should its priority be reinstated. Gold (1972), a strong advocate of this position, states, "No attempt has been made to make the evaluation period fruitful to the client in terms of the development of the skills which are being evaluated. If anything is gained from the evaluation period, it is usually adjustive in nature with the clients often spending many hours or days being nonproductive and not learning new skills" (p. 12).

Therefore, Patterson's statement, "There is no better way to evaluate ability to do something than a trial at it" (p. 149), must be amended to read, "There is no better way to evaluate ability to do something than by training for it." Evaluation via training is not only more realistic, but more profitable for the individual and the workshop.

Training

The essence of any program for the handicapped is education and training. The acquisition of useful and appropriate skills and behavior is the primary goal of training, yet few moderately and severely retarded people receive training commensurate to their potential during their tenure in sheltered workshops. If they are capable of learning complex vocational tasks, such as bicycle brake assemblies (Gold, 1972), cam switch assemblies (Bellamy et al., 1975) and electric circuit board assemblies (Levy, 1975), then the question remains, Why are they not being provided with opportunities to attain these skills? One explanation for the lack of training for complex tasks is that workshops seldom acquire subcontracts that demand such highly skilled performances (Gold, 1975; Greenleigh Associates, 1973; Pomerantz & Marholin, 1978). Most workshops concentrate on simple jobs or low skill level tasks that require minimal training. Thus, sophisticated training procedures required for learning complex work tasks are seldom necessary.

On the rare occasions when subcontracts for more complex work tasks are acquired by sheltered workshops, the jobs are relegated only to the workers with the highest skill levels. Clients with lesser abilities are not allowed to attempt the jobs. This situation is usually explained by the workshop's immediate production needs (e.g., "The customer wants a shipment by tomorrow") and/or by insufficient staff to train less skilled individuals. Many moderately and severely retarded people can learn complex tasks very quickly [approximately 90 minutes to learn a bicycle brake assembly (Gold, 1972) and 120 minutes for electric circuit board assembly (Levy, 1975)] when taught in a one-to-one situation using systematic techniques; one-to-one training, however, is seldom provided on the basis that there are insufficient professional staff available. Levy (1978) discovered that sheltered workshop supervisors spent only 10% of their total time training. Apparently workshops do not establish clear training procedures and systems, do not train staff to use them, or do maintain implementation.

In summary, the complex work of which moderately and severely handicapped persons are capable is seldom available to them. When complex work is available, there is insufficient training and few workshops have well-defined training time, procedures and systems for implementation. The result is that staff spend little time training. Educators have the ability to give handicapped people skills far beyond those they will have the opportunity to use given the current nature of most sheltered workshops. It appears that the technology for training has surpassed its application.

A second training goal is to provide clients with the appropriate social and work behaviors necessary for successful integration into more normalized work environments. The lack of appropriate behaviors has been described as the most severe deficit of retarded workers. The design of effective and efficient programs to train appropriate work behaviors requires knowledge about normal worker behavior and about how it differs from retarded worker behavior. These variables have yet to be empirically specified. It is imperative to conduct research to specify appropriate work behaviors and to develop compatible curriculum and training techniques. To achieve success in this area, training staff and researchers cannot guess what is important to teach! The needs of handicapped people are too great for them to waste time learning nonfunctional behaviors.

Environment

Another consideration related to training social and work behaviors is the instructional environment. The population of sheltered workshops is considered abnormal by society; obviously, that is why they are there. Attempting to teach normal behaviors in abnormal settings, however, is unrealistic. Handicapped people are expected to learn to act normally without the benefit of normal population models. The question is, Is it feasible to teach appropriate behavior skills in an abnormal and segregated environment? The level of job success attained by ex-workshop clients would indicate that the answer is no. Attempts to provide handicapped workers with access to normally behaving peers is essential to the successful development of appropriate work skills.

Productivity

Another area critical to vocational success for handicapped people is job productivity. Competence is one aspect of success; consistent quality and rate of performance are others. Yet, one only has to consider the average wage of workshop and activity-center employees to realize that sheltered workshops are not highly productive environments. A recent national survey of sheltered workshops found that mentally retarded workshop employees earned an average of $1,030 per year, and those in work activity centers earned only $520 per year (Greenleigh Associates, 1975).

One reason for low worker productivity is lack of motivation due to the type and quantity of tasks found in sheltered workshops. The work is generally simple and repetitious, providing little stimulus to workers. Research has shown a strong relationship between task characteristics, worker satisfaction and production (Levy, Pomerantz, & Gold, 1977). Another reason for low productivity is that few workshops have sufficient quantities of work to sustain continuous high rates of production. When there is no need for high production rates, workers engage in off-task behavior or pretend to look busy. Sheltered workshop supervisors seldom pressure workers or work with them to encourage higher productivity. In contrast, competent industrial supervisors spend a majority of their time working with the line staff to encourage higher productivity (Levy, 1978). Furthermore, with no need for high productivity, efficient production design is not encouraged in sheltered workshops; thus, little effort is extended to design cost-effective systems or to invest in materials and equipment for facilitating higher production. The singular message to everyone in industrial environments is that their purpose is production; the singular message to everyone in sheltered settings is that their purpose is charity.

Under present circumstances, it is difficult to know whether low productivity is a factor of worker limitations or environmental conditions. Levy (1978) provided evidence to indicate that, for some workers, environmental factors are critical to productivity. In that study, sheltered workshop employees who were deemed not capable of competitive employment were, nevertheless, placed into competitive jobs. One worker who had never surpassed 32% productivity in ten years of sheltered employment achieved 62% after two days on the job. Within ten days he reached 100% with an error rate of less than 0.5%. These data raise the question, How many other handicapped workers are in similar workshop situations?

In summary, conditions in sheltered workshops, such as simplified tasks, limited numbers of tasks, poor production designs, and staff indifference to production are major contributors to low worker productivity.

Organizational Structure

The final program components to be discussed are the organizational structure and the staff. Nelson (1971) describes a dichotomy that exists in most sheltered workshops between the goal of habilitating clients and the need for production. For many professionals, the two orientations are not compatible. Some clients need an unpressured environment where they can learn skills at their own pace. In the unpressured setting, demands for high production rates are inappropriate. Other clients merely need a job; their goal is to earn a living wage.

A factor that may determine the orientation of the workshop is the staff's training and background. If their training is in the social sciences, such as education, psychology, or social work, then the production components of the program will probably not be fully developed. Conversely, if the staff's training is in business, then the social service orientation will be less highly stressed.

In either case, it appears that the conflict between staff orientations interferes with the goal of effectively preparing handicapped people for more normal lives. If the investment in sheltered programs does not result in the habilitation of handicapped people, alternatives should be considered. The chronic expenditures of considerable financial and human resources without reasonable improvement in the quality of handicapped peoples lives can no longer be tolerated. It is extremely difficult to change large, well-established, ongoing systems, but attempts must be made. The next part of this paper will present some alternatives.

ALTERNATIVES

Devising and implementing solutions to complex problems can be challenging. Creativity, dedication and perseverance are required for meaningful change. New approaches to vocational programming for handicapped people must replace well-intended but less effective ones if the quality of their lives is to be enhanced.

Recently, the Greenleigh Associates (1975) assessed current practices of sheltered workshops in the United States and recommended alternatives. The suggestions made in this report, such as for enclaves in private industry and for government-sponsored businesses, require a firm commitment from our society and the government to the rights of the handicapped to participate in the labor force. The United States has not yet made that commitment, although it is regarded by many as one of the more progressive and socially conscious nations in the world. Without that commitment, change would be difficult, if not impossible.

Given sufficient governmental support, a number of alternatives are suggested. First, a new organizational structure controlled by one central governmental agency needs to be established. This agency would financially support and monitor the integrity of programs under its jurisdiction. Four separate programs under the central agency would provide direct services to handicapped adults. These programs would be responsible for: 1) evaluation, 2) competitive employment, 3) controlled work environments, and 4) alternatives to work. Each program would have clearly defined roles and responsibilities for carrying out service to handicapped people.

Evaluation

Clients initially referred for adult services would enter a regional diagnostic evaluation center staffed by professional evaluators. At this center an evaluator could determine the client's current functioning level and vocational training needs in order to determine the best initial program for each individual. After initial evaluation, each individual would be recommended for one of the three other program options. The risk that an improper placement might occur would still exist, but the probability of that event would decrease. Beyond evaluating clients, the center staff would be actively involved in research to improve existing evaluation procedures and to develop new ones.

Competitive Employment

It is becoming clear that the best place to train an individual for a competitive job is at the employment site (Levy, 1978; Wehman, Hill, & Koehler, 1979). The conditions of that site cannot be accurately replicated in artificial settings. Therefore, one program option would use competitive industrial settings.

Many handicapped workers fail at competitive jobs because of insufficient training and support systems. Many problems which occur on the job could be easily resolved if they are treated immediately. If they are not immediately dealt with, they can deteriorate into major problems, resulting in termination of the employee. A Trainer-Advocate (T-A) model can be employed to train the handicapped worker on the job and to resolve problems as they occur, thus increasing the probability of successful placement (Levy, 1978). An objective of the model is for the T-A gradually to remove himself or herself as regular job supervisors begin to assume management responsibilities. This model, employed in many parts of the country, has proved to be an effective and economical way of placing people in competitive employment.

Other models, such as the buddy system and worker enclaves, could be employed, depending on the clientele, available staff and particular situations. With the buddy system, a nonhandicapped employee works alongside a handicapped person and serves as a model and trainer for the handicapped worker. In the enclave model, a group of handicapped people works as a unit in an industrial setting with professional supervision; the handicapped worker experiences a normal work situation in a manner which does not threaten him or her and the other nonhandicapped employees. Hopefully, as enclave workers become more proficient they will have the opportunity to transfer to the regular work force.

To make competitive employment a feasible large-scale option, the government has to provide employer incentives. To date, a few demonstration programs document the feasibility of successful job placement of clients. When the demonstration stage evolves to large-scale placements in the work force, industry might become resistant. Employers might find having large groups of handicapped people in their work force unacceptable. The fact is that the high current and predicted rates of unemployment in this country might decrease the need for handicapped people in the labor force. Nevetheless, if legislation mandates and provides incentives for businesses to accommodate handicapped workers, then their acceptance as full-fledged members of the work force should be facilitated.

One form of employer incentive would be to provide on-the-job training funds during the initial training period. Another incentive would be to provide wage subsidies for individuals who do not meet production standards. If employers are not required to withstand the cost of training, hiring the handicapped should be more attractive to them. The benefits to handicapped people, such as having the opportunity to work in a normalized setting, feeling useful and earning a decent living, are self-evident. The benefits received by society through reducing financial dependency, improving human lives, and creating more taxpayers should more than offset the potential risks of paying illegitimate training subsidies.

Controlled Work Environment

An alternative for those not presently ready for competitive employment would be the controlled work environment. The controlled work environment would be established with the sole purpose of providing a place of employment for handicapped people with work potential and interest. These shops would be operated as businesses where people would engage in work and be paid at least the minimum wage. Long-term contracts would be obtained from governmental or private sources. The legislation to enable this to occur has already been approved by Congress with the passage of the Wagner O'Day Act in 1938 and more recently with the Javits-Wagner O'Day Act in 1971.

The work would be at higher levels of complexity than presently found at most sheltered workshops. More complex work should increase the challenge to employees and should generate additional income for the workshop. The environment would be business-oriented, and staff, working with employees, would serve as good worker models. Production systems would be designed to maximize productivity. Training would be available, but only in the context of the work task; that is, the specific jobs and the relevant appropriate behaviors would receive attention. Professionally trained support personnel would consult with line staff on specific behavior or learning problems. Thus work, not training, would be the workshop goal. It is predicted that through providing a genuine, productive business environment where employees engage in meaningful remunerative work, higher levels of appropriate client behaviors and skills will naturally emerge.

An Alternative To Work

The final program option is a life activity program to serve those persons who are either presently incapable of work or who choose not to engage in work. Not everyone can or should be involved in remunerative work. Some people have so many deficits and require programming in so many areas that work may not be a first priority for them. Others may choose not to spend their time working and would receive nonvocational skill training and experience. For this group, a program emphasizing independent living, self-help, and recreational skills would be appropriate. Participants would be subsidized with a disability pension. Should their interest and priorities change such that a vocational direction seems more appropriate, they could transfer to a controlled work environment or competitive employment.

CONCLUSION

The present system of services for the moderately and severely retarded is inefficient, ineffective, costly, and, in fact, debilitating to those it is intended to help. Seldom do the moderately and severely retarded acquire the skills necessary for meaningful participation in the labor force. The potential of many of these individuals to enter the work force has been demonstrated. Yet the knowledge of that potential has produced little change in the current service delivery system. The failure of handicapped people to realize their vocational potential must be attributed to the systems through which they receive services, for these systems frequently reinforce individuals to display inappropriate behaviors. Indeed, they often acquire new inappropriate behaviors as they participate in presently existing vocational programs.

The resulting effect is one of debilitation rather than habilitation.

A substantial change is not only warranted, but required. The alternatives suggested here present their own problems. If these suggestions stimulate focussed discussion, however, a new concensus could evolve, one which would construct a more effective service system for handicapped citizens. Certainly improving the quality of handicapped peoples' lives will require that we find and employ better strategies for service delivery in the future than those we have employed in the past.

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Community-Based Vocational Training and Placement for the Severely Handicapped

Keith H. Larson
Jean P. Edwards

In order to provide an example of a reliable, community-based training model for the severely handicapped, this chapter will focus upon the Portland State University Vocational Careers Model. This model is based on the recognition that successful management of community training requires a rigid structure of control and data collection, a structure in which all decisions affecting the program and its clients are directed toward, and in which all trainer efforts are evaluated expedient to, community vocational placement. Two premises predicate the model: 1) a severely handicapped person will have a better quality of life if he or she can work independently alongside nonhandicapped workers in a community setting and 2) training for such placement is best accomplished on actual community job sites rather than in sheltered settings. These premises derive from the personal experience and convictions of the authors, who have each been involved in work experience programs for the handicapped since 1963, as well as from the convictions of others who have also valued the influences of reality on the training of the severely handicapped.

Among those who have agreed that community training and placement are desirable and effective, Sontag and Smith (1978) stressed as a federal government goal the opportunity for the severely handicapped to live to their maximum productive potential. Brown, Wilcox, Sontag, Vincent, Dodd, and Gruenwald (1977) emphasized the responsibility of all educators to develop and implement educational delivery systems that maximize the opportunities of the severely handicapped to learn the necessary skills for full participation in heterogeneous adult communities.

Although Bellamy and Snyder (1976) and Gold (1974) have clearly demonstrated the availability of instructional technology for teaching severely handicapped individuals useful and productive vocational tasks, Pomerantz and Marholian (1977) surveyed the literature and pointed out that most sheltered workshop programs fail to do any progressive training or to make job placement efforts in the community. A 1972 HEW (Note 1) report indicated three major problems found among vocational programs; these programs 1) failed to prepare the environment for students as well as they prepared the students for the environment, 2) failed to take advantage of, or solicit assistance from, services or groups outside the program administration, and 3) failed to assure the relevance of program content to the job market.

Pointing to problems of another kind, Wolfensberger (1972) voiced general dissatisfaction with the diagnostic procedures for the severely handicapped. He stated, "The notion of utilizing the initial performance of severely handicapped young adults on evaluation devices for the purpose of judging their feasibility for future employment is ridiculous. The population is useful for occupational success if they have appropriate training, appropriate management techniques and are assigned appropriate tasks" (p. 71). Moreover, he pronounced that "Diagnosis is quite often a dead end, frequently resulting in a frustrating series of referrals instead of leading to a meaningful assignment. Diagnostic services are often overdeveloped in comparison to other available resources" (p. 71). Not only diagnostic, but assessment procedures too have come under scrutiny. Bellamy, Peterson, and Close (1975), for example, question assessment use thus:

> Many of the innovations in services for the severely handicapped have resulted from attempts to serve individuals who have been previously excluded because of poor assessment results. It would seem more appropriate to find a service procedure through which severely handicapped might be served rather than attempting assessment procedures aimed at finding particular individuals for particular vocational activities.(p. 175)

In addition to problems with diagnostic and assessment procedures, financial contingencies which reward nonplacement of clients also impede community-based training efforts and community placement. Many programs that purport to provide community vocational placement and to promote client independence often exhibit contradictory actions because of these financial contingencies. A client, for example, is usually assessed by a sheltered workshop for as long as an assessment fee is being paid; similarly, the time deemed necessary for work adjustment training is apt to coincide precisely with the time for which funding is available. Furthermore, the workers in sheltered workshops or activity centers with the best production reputations are not easily released for community-based training or job placement.

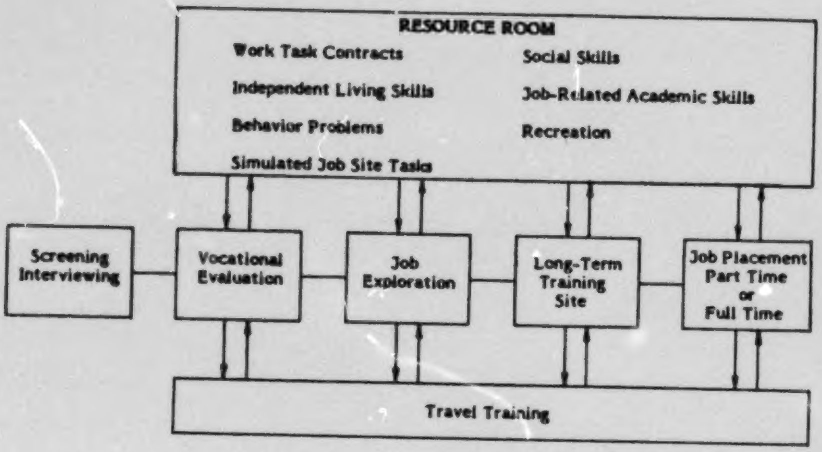
In order to mitigate these identified impediments to community job placement, the Vocational Careers Model is designed to complement and support such placement. Within this model, a structure has been established in which all program and client decisions support a community vocational goal and all trainer efforts are evaluated against the specific activities which lead most efficiently to that goal. The model features five components, each of which addresses the problems outlined above: 1) community-based training experience for clients, 2) clearly stated trainer responsibilities, including weekly reporting of individual professional performance, 3) extensive environmental preparation to assure long-term support of clients, 4) minimal prevocational assessment and training, and 5) use of proven instructional methods for the severely handicapped (e.g., task analysis, prescriptive teaching and behavior modification). The structure of the Vocational Careers Model is indicated in the Flow Chart (Figure 1); the arrows in this chart demonstrate the interrelatedness of all client activities. Very little of the model is sequential; rather, the model is designed to immerse the client into the realities of a community vocational site as rapidly as possible and to draw training priorities from the client's specific on-site needs.

Since three manuals, Assessment, Management, and Training, are available from the Vocational Careers Model, the discussion which follows will be limited to 1) illustrating how a trainer works with a single client, 2) explaining the purpose of each of the model components, 3) identifying management problems and solutions, and 4) presenting data summaries to indicate typical amounts of training effort needed for clients and trainers in order for clients to reach independent employment status.

INDIVIDUAL TRAINING ACTIVITIES

The Vocational Careers Model employs a community trainer who typically works with seven to ten different clients at a time. A resource room or home base is provided for clients when they are not involved in a community activity. The resource room activities listed on Figure 1 could be offered in a classroom, an activity center or a sheltered workshop. A trainer's activities, which are directed towards the goal of independent

Figure 1: A Flow Chart of Major Activities in the Community-Based Training Model


RESOURCE ROOM
Work Task Contracts
Social Skills
Independent Living Skills
Job-Related Academic Skills
Behavior Problems
Recreation
Simulated Job Site Tasks
Screening Interviewing
Vocational Evaluation
Job Exploration
Long-Term Training Site
Job Placement Part Time or Full Time
Travel Training

employment, follow a defined sequence. As the following steps indicate, there are contributing activities which must be carried out and non-contributing activities which must be avoided.

The first step in securing employment is to locate potential job sites. The trainer considers the current economic conditions of the community and lists several job sites of interest to a specific client which offer a variety of tasks to learn. The trainer contacts the employers at these job sites and asks if a visit might be arranged. During the visit, the trainer views the setting not only in terms of jobs as they are currently structured, but in terms of tasks which might be regrouped for the client's particular skill level. After five or six explorations at different sites, the trainer returns to whichever site interests the client, offers the greatest potential for the client's successful performance and has the potential for providing a paid position.

The second step occurs when the trainer contacts an employer and asks permission to use the site for short-term training. The trainer indicates to the employer that he or she will be present at all times so that the client will not require any supervision from the employer's own staff. As soon as the employer grants permission, the trainer brings the client to the job site, works side-by-side with the client, and observes which tasks or parts of tasks the client completes with minimal instruction and which require more instruction. The trainer then task-analyzes the latter and writes instructional programs. Since initially the trainer and client are on the job site for only part of the day, the trainer usually borrows production materials to use for task simulation in the resource room. In addition, the trainer teaches the client how to use public transportation every morning and night and provides additional opportunities for mobility instruction when the client is not at the job site.

Finally, the trainer works with his or her client to develop and improve those specific behaviors and skills needed at the specific job site. The trainer does not expect previously learned skills or behaviors to be generalized and to make the client successful on this job. In summary, he or she makes certain that the client learns all work tasks, social behaviors and travel skills for success on the intended job site.

So that nothing in the setting creates problems for the client, the trainer does not only work with the client while at the job site; he or she works as hard to prepare the job environment as to prepare the client. The trainer makes certain that the other employees understand the training process and that everyone involved at a decision-making level is informed of all training stages. The immediate job supervisor, other management people, personnel, office staff and parents or guardians are all encouraged to support the client. The trainer reinforces cooperative attitudes and develops understanding and skills on the part of fellow employees to work more effectively with the client on the job, in the lunchroom or on coffee breaks. The trainer makes certain that the primary hiring authority is aware of all the skills gained by the client and how the client's production compares to that of the regular workers.

When the client becomes well known to the employer, well accepted by fellow employees, and demonstrates an ability to perform the required work, the trainer is in the most favorable position to discuss permanent employment. Permanent employment should be 1) for a reduced number of hours a day, 2) on selected tasks the client has mastered and 3) under employment conditions attractive to the employer (e.g., a tax credit is available which effectively reduces the pay rate to the employer without reducing the client's pay). The trainer always guarantees his or her continued assistance after placement.

Thus, an ideal situation has occurred for obtaining a positive response from an employer. First, from the job exploration, the trainer already knows there is a potential employment opportunity. Second, the employer and employees have had an opportunity to observe the client working at an acceptable level of performance. And third, everyone has come to know the client as an individual.

In summary, some of the actions taken in this community-based vocational training effort are:

1. The trainer directed his or her efforts to specific activities. Only those activities that would immediately and effectively lead to community job placement for the client were emphasized.

2. A specific job training site was selected jointly by the trainer and the client based on a total view of the job environment, not just the specific job tasks. The trainer looked at the potential for job placement with a concern for

the realities of the marketplace, the specific job tasks to be structured and taught in order to constitute a full- or part-time position, and the job environment's potential ability to sustain a severely handicapped person as an employee. The trainer allowed the client to help make the site selection based on his or her own criteria (e.g., the lunchroom was nice, the other workers were friendly, or the people wore nice uniforms).

3. The trainer provided instruction primarily at the site where the client was to survive independently and drew all of the training priorities from the specific needs identified at that site.

4. The trainer prepared the environment as effectively as the client was prepared.

5. The specific social behaviors deemed most important for survival among fellow employees became priority skills for the client to learn.

Actions not taken by the trainer include:

1. The trainer did not go to an employer alone and illustrate the plight of the mentally retarded with words or a slide show.

2. The trainer did not spend 16 weeks with the client in prevocational assessment. Neither did the trainer establish job stations in a classroom setting and attempt to draw conclusions about a client's interests based on those tasks. The trainer recognized that job tasks may contribute little to the job's desirability to the client.

3. The trainer did not request copies of the client's performance on the Wechsler Intelligence Scale for Adults or other meaures of intelligence to make judgments about his or her ability to master certain work tasks.

4. The trainer overlooked six months of prevocational training on tasks indicated by some "expert" as potentially useful for all severely handicapped clients.

5. The trainer did not task-analyze every phase of the job the client was to perform prior to bringing the client to the site. Rather, each task was modeled for the client and he or she was allowed to attempt the task. Task analyses were prepared and instruction was provided only for those tasks which were problematic for the client.

The above actions, taken and not taken by the trainer and his or her client, accomplished efficiently the placement of a severely handicapped adult into a community vocational setting with nonhandicapped persons.

MODEL COMPONENTS

The Vocational Careers Model components will be described briefly in the order in which trainers report their activities on the Weekly Agenda and Effort Tally Sheet (Figure 2). Client activities do not necessarily occur in this sequence, as was indicated in Figure 1. Further discussion of the Weekly Agenda will be provided in the section on management problems and solutions.

1. **Client Search.** As indicated previously, the process of locating clients is different for each agency adopting this model. Clients may be referred by school districts, vocational rehabilitation agencies or parents.

2. **Client Screening.** Client screening initially includes gathering available data concerning individual clients and meeting with those clients and others who share responsibility for them. The model does not require that any particular behaviors or skill levels exist at admission. While all clients thus far have been able to feed, toilet and dress themselves, experience with the model indicates that, given sufficient time and appropriate job-site development, most handicapped adults can be successfully placed (even those for whom vocational placement is commonly deemed unfeasible).

3. **Client Assessment.** A Vocational Careers Assessment Manual is used to obtain data on client performance and behavior relevant to vocational success in a community work setting. Data are criterion referenced to determine appropriate intervention levels in a try/help/try again educational sequence.

This manual gives an overview of several skill areas often related to vocational success for the severely handicapped, provides a vehicle for planning instruction, and serves as the first step of an Individual Educational Plan for use with parents or surrogate parents. It is to be emphasized that any training priorities established through the findings of the initial assessment procedure are of a lower priority than training needs identified through a client's performance on a specific community long-term training site or on a job placement site. Clients are not required to learn a particular set of prevocational skills prior to placement at a community job site. Community training sites are sought for a client even if that client has not achieved competency on any of the assessment items.

Figure 2: Weekly Agenda and Effort Tally Sheet

DATE________________

1. **Client Search**[a]

(CS) 2t (ST)
(CS) 1/4 (PA)
(CS) 1t (CS)
(CS) 1t (KH)

2. **Client Screening**

(CS) 1-1/4v (CS)
(CS) 3/4v (PA)
(CS) 1v (ST)

3. **Client Assessment**

(PW) 1t (PA)
(PW) 3hr Assessment (PA)
(PW) 3hr Assessment (ST)

4. **Classroom Prevocation Programs**[b]

(PW)-1 Vol-3 BO-3
(PW)-1 Vol-3 MW-2
(PW)-2 Vol-2 DG-2
(PW)-8 Vol-6 WG-4
(PW)-1 Vol-5 DR-5
(PW)-2 Vol-1 DC-2
(PW)-1 Vol-3 FF-3
(PW)-3 Vol-1 KK-1

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[a] First set of (initials) = staff member
t = number of telephone calls
v = number of visits
Second set of (initials) = client

[b] The first example reads as follows:
(Staff) taught 1 program, Vol (Volunteers) taught 3 programs, (client) has 3 programs currently available

5. **Classroom Programs Simulating Training Site Tasks**

(PW)-1 Vol-1 MW-1
(PW)-1 Vol-2 DR-1
(PW)-1 Vol-1 DC-1
(PW)-5 Vol-1 WG-1

6. **Travel Training**

(CS) 3-3/4v WG
(CS) 5t Tri-Met Public Transportation Co. (group/training)
(WL) 6v FF
(WL) 6-1/2v BO

7. **Employer Contacts--Training Materials**

(CS) 1v American Cancer Society
(PW) 2t Bonneville Power Administration
(PW) 2t American Cancer Society
(WL) 1v Intel Electronics Co. (private corporation)

8. **Employer Contacts--Long-Term Training Sites**

(CS) 1t Portland Recycling -JG
(CS) 5t Health and Phyiscal Education Department at Portland State University -FF/KK
(WL) 1/2v Mother's Deli -DC
(WL) 1t Health and Physical Education Department at Portland State University -BO
(PW) 1t Sonic -MEW (stereo manufacturing)
(PW) 1t Portland State University Food Service -MEW
(PW) 1t Ondine Dormitory -DR

9. Long-Term On-Site Training Sessions

(CS) lv Portland State University Food Service -BO

(PW) 1sc Ondine Dormitory -DR

(PW) 1sc Health and Physical Education Department at Portland State University -DR

(WL) lv Portland Recycling -MW

(WL) lv Portland State University Food Service -BO

(WL) 1/2v Ondine Dormitory -DR

10. Employer Contacts--Job Exploration

(CS) lt Portland Motor Hotel -JG

(CS) lt, lv Balliwick Motel -DG

(CS) 1-1/2v, 3t Hilton Hotel -FF

(WL) lt Ad Mail -BJ (advertising company)

(WL) lt Mannings Restaurant (-BO)

(WL) lt, lv, 2L Holladay Park Hospital -DG

11. Employer Contacts--Job Placement Training

(CS) 3/4v Pay 'n Save -DC

(CS) 2v Bonneville Power -BJ

(CS) lv Red Lion Motel Hotel -DG

(WL) 2t Tektronix -BO (electronic company)

(WL) 2t Wilson High School Kitchen -JG

(WL) lt Intel -MW

(WL) lt Sonic -MW

(WL) 2v Intel -MW

12. Job Placement Training Sessions

(CS) 2-3/4v Pay 'n Save -DC

(CS) 1-1/2v Zoo -KK

(CS) 1hr making holder for training program

(WL) 3v Hilton -FF

(WL) 3v Red Lion -DG

13. **Parent Contacts**

(CS) 2t G
(CS) 2t C
(CS) 3t K
(CS) 3t R
(PW) 5t G
(PW) 1t F
(PW) 3t R
(WL) 1-1/2v J
(WL) 3t W
(WL) 1t G

14. **Other (various support services)**

(CS) 2hrs staffing
(CS) 1t Mental Health Divison
(CS) 1hr graduate students
(PW) 2rs staffing
(PW) 3t Regional Program for the Deaf
(PW) 1t Bill Cardwell-Blind Commission
(PW) 1-1/2 hrs graduates
(PW) 1t Special Olympics
(WL) 2hrs staffing
(WL) 1t Portland Habilitation
(WL) 1t Department of Vocational Rehabilitation
(WL) 2t journal writing article

4. **Classroom Prevocational Programs.** The resource center provides a coordination point for all client activities. In the Vocational Careers Model, a client is always fully involved, either in the community or in direct instructional programs related to skills and behaviors required on a current or anticipated community job site or at a paid task. A major goal of the resource room is to increase a client's work tolerance and attention to task, and these take precedence over task content. Reinforcement with money may begin with nickels for a few minutes on task (which may immediately be spent for food or drink) followed by increasingly longer delays of payment. Training goals can be most easily kept in focus

with volunteer tasks (e.g., sorting and counting materials for the American Cancer Society) where funds for remunerating clients are raised from local foundations or service organizations. Contract work without delivery pressure can serve a similar purpose.

5. Classroom Programs Simulating Training Site Tasks. Simulation programs may be developed to replicate any community skill needed by a client. For example, distinguishing the number five bus from the number two or seven bus exemplifies a simulation program to assist travel training. Similarly, folding towels in the resource room simulates an initial laundry training site. By using classroom simulations of work tasks, clients can receive additional training on specific problematic task components.

6. Travel Training. Each client is provided the opportunity to learn how to move independently from his or her home to the resource room or job site, using public transportation or walking. Instructional programs may include both actual route practice programs as well as simulation programs with polaroid prints or slides showing landmarks, traffic or personal conduct and safety rules. Each program is specific to the actual community travel needs of the clients.

7. Employer Contacts: Training Materials. A trainer occasionally requests production materials from community job sites prior to conducting a job exploration. The purpose of this activity is to familiarize the client with the materials, and not for general instruction.

8. Employer Contacts: Long-Term Training Sites. Several community job sites are sought to provide initial community work experiences not necessarily considered to be potential placement sites. These sites must be highly flexible because a trainer and client need a place where short work sessions, low production, low quality of work and inappropriate behaviors do not upset the employer or other nonhandicapped employees. This site analysis may be done independently by a trainer or as a result of an exploration.

9. **Long-Term On-Site Training Sessions.** Long-term training sites are used to provide community job placement experiences for clients. The skills required can be minimal (e.g., sorting or folding), and the initial time involvement can be for as little as one hour a day. After training begins, all job-site and resource room instructional programs and training efforts become focused only on those skills and behaviors which will allow the client to survive independently at that specific site. One-to-one training supervision is necessary initially at the site, with a final stage of supervision requiring only spot checks. This type of community experience is maintained with increased client time on that job training site or other sites until a job placement experience begins.

10. **Employer Contacts: Job Exploration.** The purpose of job exploration is threefold: 1) to allow the client to observe a variety of jobs in the community and to participate in the selection of a site, 2) to allow the trainer to assess the job-placement potential of particular job sites, and 3) to allow the trainer to evaluate and train the client in appropriate community social behaviors. It is important to avoid determining a client's vocational interest by limiting him to work samples from an unseen site, for work tasks in themselves are often insignificant and sometimes irrelevant variables in determining job desirability. Job exploration further provides the opportunity for the employer and other employees to become acquainted with a severely handicapped individual in an unpressured situation.

11. **Employer Contacts: Job Placement Training.** The trainer may return to a community business site and discuss a particular task (not necessarily for a currently structured job) which the trainer can use one or two hours a day to train a client. Examples of actual client jobs in the Vocational Careers Model include: labeling prices and

stocking shelves in a variety store, sorting and packaging in an electronics manufacturing plant, washing dishes in a restaurant, washing and folding laundry in a motel, folding sheets in a laundry, cleaning rooms in a retirement home, completing custodial tasks in a hotel employee locker and lounge area, and cleaning restaurant fixtures and refilling condiments after hours.

Site characteristics contributing to successful placement obviously vary with each client, but a few generalizations can be made. Job sites where the work task itself consistently cues work are best for clients with a record of deviant behaviors (e.g., having dishes coming steadily from a large dishwasher, rather than having a group of tables to clean). Job sites with low staff turnover are preferable since developing a supportive environment is as important as training the client. Thus, excessive worker turnover can defeat placement efforts. Job sites where the task meaningfully contributes to the facility's overall operation are also preferable. For example, a client who is the only sheet folder in a hotel laundry is perceived more positively by co-workers and management than a client who is one of ten sheet folders.

The community trainer only contacts employees regarding clients who have been previous visitors. Therefore, the client is somewhat familiar to the prospective employer. In addition, the community trainer guarantees to provide total supervision of and instruction for the client. The employee is informed that the Vocational Careers Model is responsible for the client's salary and insurance coverage during training.

12. Job Placement Training Sessions. Training occurs after a community job site has been approved by the trainer and, to the degree possible, by the client. The trainer works with the client demonstrating the job and observing his or her performance. After several work sessions, the trainer task-analyzes and writes specific instructional programs only for those tasks which the client has demonstrated difficulty in learning through modeling. The trainer also makes a careful review of the environment and develops instructional programs for dealing appropriately with unique job-site characteristics. These programs may include how to interact with a particular fellow employee, use the vending machine in the lunch room or tell time correctly. Where appropriate, vocational tasks from the job site are simulated in the resource room to allow additional practice. All instructional priorities are dictated by the needs of a specific job site. Therefore, during job placement training sessions, the trainer has four goals: 1) to demonstrate the client's ability to learn job tasks and appropriate job-related behaviors, 2) to increase the client's rate and quality of performance on job tasks and behaviors, 3) to show the employees and supervisors appropriate instructional interactions with the client and 4) to make certain that all environmental contingencies controlling hiring decisions are as favorable and positive as possible for the client.

The trainer's additional responsibility is to help the employer consider all possible options for the client's employment. These options might include restructuring a job to encompass fewer tasks, arranging a part-time job or establishing a shared position. Many possible job structures can avail a severely handicapped individual the opportunity to travel independently to a work site, to display successfully learned work tasks, to work alongside nonhandicapped supportive co-workers, to take lunch and coffee breaks in a social setting, and to become partially or totally financially self-supporting.

13. Parent Contacts. Frequent parent or guardian contacts establish consistency in training efforts at home and work and maintain support for the agreed-upon client goals. All summary data, such as client training experiences, work experiences and work references from employers should be shared with the parents so that they can be the clients' long-term advocates.

MANAGEMENT PROBLEMS AND SOLUTIONS

Four major management problems of community-based training must be solved to avoid trainer frustration and excessive paperwork. These problems are establishing community vocational contacts, maintaining efficient information exchange and data recording systems, recognizing staff effort and developing a method for summarizing overall project effort.

A program must maintain, through appropriate letters and certificates of award, its established community vocational contacts. The management structure must avoid overlap of contacts and insure recognition of cooperative community members. Filling in blanks on a form, signing or adapting a standard letter, or making employer contact notes on a preprinted file card are all examples of efficient ways to maintain the record-keeping and public relations efforts necessary to community-based training.

Staff communication and data recording must be coordinated with various staff members active in the same business community for the benefit of the same client. An efficient information exchange and data recording system must be devised, or time spent in meetings and recording data may exceed time spent with clients. A tightly structured Weekly Agenda and Effort Tally Sheet (Figure 2) and Community Vocational Training Staff Effort Summary (Figure 3) for trainers serves three purposes: 1) to control discussion at meetings to a single basic component area at a time, 2) to rapidly summarize a trainer's efforts in each component area, and 3) to record different types of services afforded to individual clients. As trainers report their efforts in each component area, other trainees seek expanded information on an item only if it is needed. As indicated on the Community Vocational Training Staff Effort Summary (Figure 3), arbitrary time allotments are assigned to five common activities. Trainers simply tally the activities (and the client involved) and record the appropriate time allotments, thereby avoiding cumbersome time keeping.

Regular recognition must be made of all areas of a trainer's professional efforts leading to vocational placement and not only of final case closure. Unquestionably, vocational training and placement of severely handicapped clients is time consuming. The community trainer can easily become frustrated and feel unrewarded if the only indication of appropriate professional effort is a final case closure when a client is placed on a paid position. To reduce staff frustration, the Vocational Careers Model recognizes and rewards trainers for working on all training activites crucial to vocational placement for the severely handicapped. The process encourages cooperative efforts by recognizing all trainers' contributions to a successful placement.

The Community Vocational Training Staff Effort Summary shown in Figure 3 provides a vehicle to observe easily and direct staff activities. This summary serves three purposes: 1) to provide a visual summary of individual and total staff effort in each management component, 2) to easily facilitate program evaluation through an interpreted visual representation and to show which components were overly emphasized or neglected and 3) to allow a sufficiently accurate summary of weekly efforts on which to base future staff direction.

Sample Data Summaries

Supporting information for those interested in adopting the Vocational Careers Model is provided in Table 1. In this figure, data for two clients are displayed to illustrate typical staff efforts necessary to complete the training/placement process. Also shown in this figure are data representing two staff member's efforts across all

Figure 3: Community Vocational Training Staff Effort Summary

DATE ______________ to ______________

Category	Hours	5	10	15	20	25	30
1. Client Search							
2. Client Screening							
3. Client Assessment							
4. Prevocational Programs							
5. Task Simulation Programs							
6. Travel Training							
7. Employer Contacts—Training Materials							
8. Employer Contacts—Long-Term Sites							
9. Long-Term On-Site Training Sessions							
10. Employer Contacts—Job Exploration							
11. Employer Contacts—Job Placement Training							
12. Job Placement Training Sessions							
13. Parent Contacts							
14. Other							

$\text{Trainer } \frac{\text{hours worked}}{\text{30-hour base}} = \%$

______________ ______

______________ ______

______________ ______

______________ ______

TIME ALLOTMENTS

Telephone Contact	15 min.
Visitation	60 min.
Spot Check	15 min.
Instructional Program	30 min.
Mobility Program	30 min.
Letter	15 min.

model components for a 14-week period. These data illustrate the time- and cost-effectiveness of community-based training efforts.

Client A was hired after 388 hours of staff effort. The largest percentage of staff time was expended in job placement training sessions (39%), prevocational programs in which the resource room was used to provide community support activities (25%) and travel training (16%). Client B was accepted for employment after only 275 hours of staff effort (fully 100 hours less than Client A). Client B was involved in more job placement training (32%) and prevocational programs (26%) for the same percentage of time expended by Client A. In contrast, however, Client B required less time for travel training.

The data are illustrative of typical time expenditures for clients in the Vocational Careers Model. It must be noted, however, that due to the heterogenity of the clients and the job sites, generalizations must be cautiously rendered. For example, the amount of training time for bus travel may be related more to job and home location and transfers involved than to a client's learning rate. Similarly, the amount of time expended on job placement training sessions might be a function of the demands inherent in the work environment, rather than a reflection of the client's ability to handle the job itself.

Columns 3 and 4 in Table 1 itemize the total efforts of two staff members over a 14-week period. These data contrast the responsibilities of a staff member involved in community activities with one responsible for community support activities completed in the resource room. As can be seen by examining these data, the resource room trainer devotes a considerable percentage of time to prevocational programs and task simulations, while the community trainer is mostly involved with job placement contacts, work training sessions and travel training instruction.

These data should be viewed only as potential trainer costs, not as the minimum hours of experience necessary for a client to attain permanent employment. Indeed, no data are available and no costs are incurred for much client training which occurs after initial independence is established and the trainer leaves. A significant advantage of a community-based training model is the support available from sources other than project staff. For example, volunteers can carry out instructional programs written by professionals. Alternately, the bus driver and a few fellow passengers can model appropriate social behaviors even with a nonverbal client. In addition, nonhandicapped co-workers can provide "free" modeling instruction of appropriate social behaviors at coffee breaks and at lunch periods. Co-workers also provide free instruction through their performances as consistently appropriate work models. Such opportunities for utilizing the service of co-workers and volunteers to promote learning of appropriate behaviors are not available in sheltered workshops or activity centers.

CONCLUSION

Severely handicapped individuals are often viewed by vocational rehabilitation service personnel as unsuitable for any type of vocational placement. These individuals can, however, be successfully trained and placed as independent community workers. Eleven of 16 clients in the Vocational Careers Model Program are now employed in private business or industry. The daily life experiences of these individuals include independent travel to and from work and social interactions with nonhandicapped co-workers. Moreover, they all are earning self-supporting incomes. In summary, these clients have achieved a quality of life not available in institutions, in typical activity centers or in sheltered workshops.

TABLE 1

SUMMARY DATA FORM[a]

	Client Time In Training				Staff Effort Over 14 Weeks			
	Client A		Client B		Resource Room Trainer		Community Trainer	
	Hours	% Total	Hours	% Total	Hours	% Total	Hours	% Total
1. Client Search	1.0	-	4.0	2.0	5.0	1.0	4.0	1.0
2. Client Screening	2.0	-	2.0	1.0	7.0	1.0	1.0	-
3. Client Assessment	4.0	1.0	4.0	2.0	20.0	4.0	-	-
4. Prevocational Programs	79.0	25.0	72.0	26.0	208.0	38.0	-	-
5. Task Simulation Programs	6.0	2.0	13.0	5.0	48.0	9.0	-	-
6. Travel Training	61.0	16.0	19.0	8.0	14.0	3.0	57.0	13.0

7. Employer Contacts--Training Materials	-	-	-	-	9.0	2.0	-	-
8. Employer Contacts--Long-Term Sites	9.0	2.0	4.0	2.0	31.0	6.0	2.0	-
9. Long-Term On-Site Training Sessions	5.0	1.0	9.0	3.0	15.0	3.0	3.0	1.0
10. Employer Contacts--Job Exploration	2.0	1.0	2.0	1.0	6.0	1.0	9.0	-
11. Employer Contacts--Job Placement Training	44.0	11.0	41.0	15.0	2.0	1.0	55.0	12.0
12. Job Placement Training Sessions	152.0	39.0	90.0	32.0	1.0	-	189.0	42.0
13. Parent Contacts	20.0	1.0	14.0	5.0	28.0	5.0	24.0	5.0
14. Other	3.0	1.0	1.0	-	159.0	29.0	102.0	23.0
Total Hours	388.0	-	275.0	-	553.0	-	446.0	-

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[a] Hours and percents were rounded off; therefore a total of percents in a column may exceed 100%

The success of this model is due in large part to the management system developed in which relevant data can be efficiently reported and shared. This system facilitates decisions on clients' programs, reinforcement and direction of trainers' efforts, and weekly monitoring of total staff effort.

The Vocational Model is being successfully replicated by a metropolitan school district as a component of their program for 17-21-year-old severely handicapped. In addition, the Oregon Vocational Rehabiliation Services agency is applying for federal funds to support continuation of the program and to provide inservice training to agency counselors. Any program currently serving severely handicapped adults can adopt this community-based training model using current staff. The model can also be structured as a separate service. Whatever the application, a major impact will occur in the lives of those served. Training activities become immediately practical and no longer include inaccurate guesses about the unknown or underestimated vocational potential of clients. Rather, training objectives are established for a real site, at a real job, in a real environment, with people from the real world, where every handicapped person has a right to become a participating member.

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Issues in Community-Based Vocational Programming: Institutionalization of Staff

Sandra Alper
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The ability of severely handicapped persons to learn complex vocational tasks through applied behavior analysis training techniques has been repeatedly demonstrated (Bellamy, 1976; Bellamy, Horner, & Inman, 1979; Gold, 1973, 1976; Rusch & Mithaug, 1980). Still, most severely handicapped adolescents and adults remain unemployed. Where employment opportunities for these individuals exist, they are largely limited to sheltered workshops and work activity centers (Greenleigh Associates, 1975), rather than occurring in more normalized and economically rewarding work environments.

There are several factors which may contribute to this state of affairs. One might be the deficit of severely handicapped workers in communication, functional academic, and social skill requisites of working in the community (Wehman, 1976; Wehman & Bates, 1978). While it is true that severely handicapped individuals have significant skill deficits, behavioral training protocols to remediate these deficits are available. These skill deficits need no longer be seen as a major obstacle to community placement.

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A second contributing factor is the lack of a systematic process for implementing community-based vocational training and placement. Although there has been strong support in the literature (e.g., Sontag, Smith, & Certo, 1977; Wolfensberger, 1972), from professional organizations (e.g., The Association for Severely Handicapped, 1979), and legislation (e.g., PL 94-142) for the philosophy of training severely handicapped persons in natural settings, much less emphasis has been placed on delineating procedures for staff implementation of such programs. Recently, federal funding agencies have begun to support programs which are potential models for facilitating the transition from institution to community.

A third contributing factor may be the "institutionalization" of staff. This term refers to the development of expectations and behaviors in staff which serve to maintain the institutional environment rather than the independent functioning of residents. This situation arises because the institution may provide an environment as protective of staff as of residents. This protective environment may foster and maintain passive resistance to community-based programs. Among the characteristics of institutional staff which have been notedare tendencies to be protective of and to hold low expectations for residents, to maintain the status quo, and to avoid active participation in community-based activities (Fairweather, Sanders & Tornatzky, 1974; Schulman, 1980). These behaviors constitute staff institutionalization and present a primary obstacle to the deinstitutionalization of severely handicapped persons.

The institutionalization of staff may be viewed as a result of a mutual interaction among environmental factors, personal needs and beliefs, and behaviors of staff, institutional administrators, residents and members of the community. This view represents an application of the principle of reciprocal determinism (Bandura, 1977b; 1978). From this perspective, psychosocial functioning involves a continuous, reciprocal interplay between environmental, behavioral and cognitive factors. Within the current discussion of staff, behavioral factors include the overt behaviors which constitute resistance to the deinstitutionalization process. Environmental factors include the institutional organization, the residents and community. Personal factors include the individual cognitions, beliefs and needs of staff.

The reciprocal nature of these influences is reflected in the view that the environmental conditions which influence behavior are partly a result of the actions of individuals within the environment. The outcomes of those behaviors affect individual beliefs and expectations. Changes in beliefs and expectations subsequently influence behavior. For instance, consider the example of a staff member who may hold an expectation for success in placing a resident in a community work setting. The staff member may put more effort into the deinstitutionalization process and may exhibit greater perseverence when frustrated. The community may respond with greater acceptance of the resident and the goals of normalization. This change in the community environment reinforces the staff member's positive expectancies. The overt behavioral consequence may be greater effort exhibited by the staff member. In this example, there is a network of reciprocal positive feedback between the staff member and the community which facilitates attitudinal and behavioral changes favoring normalization.

An additional component of this reciprocal determinism is the mutual influence between personal characteristics of individuals, separate from their beliefs and expectations, and environment. Physical characteristics, social roles and social status may produce varying environmental reactions which, in turn, may affect self-concept. Subsequent behavior of the individual may maintain or change the environmental reaction.

Seeking to attribute causal priority to these influences is impossible because of the continuous reciprocal nature of their interrelationships (Bandura, 1978). The specific effects of altering any one aspect of this dynamic interchange must be empirically determined. The primary goal of the present paper is to describe some of the factors involved in the reciprocal determinism between personal factors of staff and their environment which constitute resistance to community-based programming. Another goal is to suggest some modes of intervention with staff which might facilitate the deinstitutionalization process.

PERSONAL FACTORS CONTRIBUTING TO THE INSTITUTIONALIZATION OF STAFF

Personal factors which may contriubte to the reciprocal determinism between the environment and behavioral resistance to deinstitutionalization include the personal needs, desires and belief systems of individual staff members. Individuals may be viewed as having personal needs, or desires, for survival, certainty, control, autonomy, acceptance and congruity. The terms "need" and "desires" are used here interchangeably to suggest an incentive value of these conditions for motivating behavior.

The Desire for Survival

The desire to survive is rooted in the demands of the evolutionary struggle. Economic security has become one means for assuring physical survival. Community-based programming may be viewed as a threat to the economic security and hence, the physical survival of the individual.

There are survival desires that go beyond preservation of one's physical being. There are also desires for existential survival, or survival of an individual identity which separates self from the world. Individuals may defend against a loss of definition of self even if their physical survival has been assured. Much of this self-definition is derived from work. The contribution of work to interpersonal and intrapersonal development has been acknowledged for some time. Engels (1940) elaborated the view that the evolutionary demands for higher cognitive and social development were present only after our primate ancestors first walked upright, freeing their hands for labor. According to Engels, it was the product of this labor that created a social demand for the evolution of physiological processes upon which are based the skills for communication and social organization. He argued that individuals who do not have work are devoid of information to communicate and of the need to relate within a social framework.

Although the anthropological truth of this sole evolutionary change as the primary cause of higher cognitive and social development may be questioned, the relationship between work and personal-social development is undeniable. It has, in part, been the appreciation of this relationship between work and human development which has served as implicit justification for the emergence of vocational training in contemporary education.

Since the desires for survival of body and self are so deeply rooted in the historical experience of individuals, actions initiated in the service of the need to survive may be performed so automatically as to escape an individual's awareness of them as survival behaviors. The fears of death of body and death of self may be so great as to result in a surrender of reason to self-preservation. Prosocial behaviors may be supplanted by narcissistic behaviors. The avoidance of the psychological devastation with respect to the loss of identity and avenues for social interaction can thus provide one incentive for an individual staff member to resist deinstitutionalization. The problem here exists in the view of deinstitutionalization as a threat to physical and existential survival. This belief may stem from a lack of self-confidence in one's ability to adapt to change and find alternative means for assuring physical and existential survival.

The Desire for Certainty

It has been observed that individuals often tend to resist uncertainty (Fairweather & Tornatzky, 1977). A person's inability to predict the outcomes of a given situation can cause one to view that situation as aversive (Seligman, 1975). Any program which has change as its goal possesses an inherent uncertainty as to the roles individuals will play following reorganization. Training in natural settings implies that institutional staff may have to alter their daily routines, professional roles and even the physical environment of their work. Individual staff members faced with unpredictable changes in their professional identity, authority or role within the institutional structure may find such change aversive.

Another threat to the need for certainty is present in the unpredictable responses of residents to unfamiliar situations encountered in community settings. Community settings represent new complexes of stimuli with a high degree of subtle variability. Even in controlled training environments it is impossible to identify and train appropriate responses to all possible environmental contingencies. Much of the training must await *in vivo* exposure. Hence, the responses of residents to these new situations may at first be unpredictable and thus threaten an individual staff member's need for certainty. One way to avoid uncertainty is to resist innovation and change (Fairweather & Tornatzky, 1977).

The Desire for Control

The desire for control may be defined as the need to cause environmental change so as to obtain a desired effect. The desire for control, like the desire for survival, may be viewed as rooted in the evolutionary process. Species and individual survival have been dependent upon the ability of organisms to obtain control over the environment, others and self. The ability to exercise control has been recognized as having an impact on the self in terms of cognitive self-concepts such as power (Minton, 1967), effectance (White, 1959), and self-efficacy (Bandura, 1977). A failure to fulfill consistently the desire for control and to establish a sense of efficacy in manipulating the environment can lead to emotional disturbance. Among the psychopathological consequences of a failure to fulfill desires for control which have been noted are a sense of alienation, social isolation, self-estrangement, meaninglessness, destructiveness and depression (Allen & Greenberger, 1980; Seeman, 1959; Seligman, 1974). The threat to an individual staff member's perceived control over the environment may provide another incentive for maintaining the institutional environment.

The institution provides a variety of external control systems. The most widely used techniques for maintaining control have come from the application of operant conditioning to behavioral management. One assumption implicit in these procedures is that through controlling the environment (i.e., by manipulating stimuli, physical and social rewards, and objects in the physical environment), it is possible to control behavior. If an individual staff member is ineffective in exercising direct control over a resident, reserve control systems (e.g., isolation, physical restraints, medication) may be implemented.

Community settings impose new environmental variables and do not include the reserve controls mentioned above.

In addition, they require internal coping mechanisms (e.g., self-control, decision making). In the transition from institution to community placement, from external to internal controls, there may exist a threat to an individual staff member's desire for control. Staff may cling to institutional guidelines and procedures, regardless of how little they contribute to normalization, because they provide a certain degree of control over the residents.

The Desire for Autonomy

Individuals may be viewed as desiring to seek independence and freedom from external constraints, or to establish autonomy (cf. Angyal, 1941; Fromm, 1955). Autonomy may involve a desire to establish oneself as independent from others, as well. Deinstitutionalization may be viewed as threatening to desires for autonomy because of the initially increased dependency of residents on staff.

The dependency of residents on staff is an integral part of their interaction. Floor and Rosen (1975) maintained that years of institutional living may foster conformity with little opportunity for problem solving or decision making. The institutional environment may preclude the type of experience required for the development of independent coping behaviors necessary in the community. In addition, the bureaucratic policies prevalent within the institution which diffuse the personal responsibility of an individual staff member for a resident (e.g., large group activities) may not be functional in natural settings. Consequently, residents are likely to make more demands on staff time during the initial period of community placement than within the institution. A staff member may thus resist community programming in order to avoid these threats to autonomy.

The Desire for Acceptance

Individuals often desire acceptance from others. Fromm (1955) has described the seeking of acceptance from others as the desire for relatedness, or the desire to feel united with other human beings. Staff may gain acceptance from residents by protecting them from the stress of adaptation inherent in community settings. Similarly, maintaining the institutional environment may result in acceptance from those community members and parents who believe it is best to separate retarded persons from mainstream society. Even though staff resistance to deinstitutionalization may be rewarded with social acceptance, it can have a long-range detrimental effect on residents. Normal human growth and development involve the risk of being hurt both physically and emotionally. Perske (1972) argued that to deny a person of risk precludes the development of new coping strategies and maintains dependency. Denying a person normal risk-taking experiences also deprives the individual of dignity, in that it diminishes that person in the eyes of others.

The protectiveness of residents arising out of a need for acceptance may also be viewed as an attempt to avoid emotional ambivalence and subsequent personal rejection. Emotional ambivalence refers to the quality of a relationship between individuals characterized by love and hate, acceptance and rejection. Human relationships are frequently characterized by investments of dependency upon others for gratification of personal needs. People may come to expect their family, friends, co-workers and acquaintances to contribute to the fulfillment of their personal needs. Relationships which possess such investments of dependency may contain some degree of emotional ambivalence because individuals rarely, if ever, fulfill these needs as consistently as expected. Because one's needs and expectations may at times be fulfilled or frustrated, an individual may come to feel both love and hate. Subsequently, one may express both acceptance and rejection toward others, as well as being the object of these conflicting attitudes and behaviors.

Staff members who support community-based programming and participate in exposing residents to the stress of adaptation may incur the emotional ambivalence of individuals in their environment. The staff member may inappropriately attribute the emotional ambivalence and subsequent rejection uniquely to the deinstitutionalization process rather than to the unrealistic expectations for need fulfillment placed upon him by his environment. The individual may come to view the emotional ambivalence characteristic of need-invested relationships as avoidable through resisting deinstitutionalization. Overcoming this obstacle may require a belief in the long-range benefits of deinstitutionalization, as well as the development of realistic expectations for fulfillment of human needs and acceptance in the individual staff member, residents and the community.

The Desire for Congruity

Another reason individuals may seek to avoid emotional ambivalence is a desire for congruity. Congruence, or the lack of conflict, may be sought in both interpersonal and intrapersonal spheres of experience (cf., Brehm & Cohen, 1962; Festinger, 1957; Steiner, 1966; Zimbardo, 1969). In an attempt to avoid interpersonal conflict and seek congruity, individuals may conform to a group, institution or ideology. In any conflict of purpose between institution and individual staff member, the individual may seek to conform to the institutional purpose and attain congruity in addition to fulfillment of the range of other human needs.

Congruence may also be represented in the intrapersonal sphere by the desire to seek resolution of the conflict surrounding how one chooses to gratify needs. Fromm (1955) presented the view that choices in life may be viewed as an unavoidable conflict between progression and regression. Progressive choices are those which fulfill human needs without subjugation of the needs of others. These solutions require a sacrifice of narcissistic interest. Regressive solutions are narcissistic in nature and require subjugation of the self or others. A regressive solution may involve well established patterns. Consequently it may be more immediately appealing, not only because it requires little or no self-sacrifice, but also because of the familiarity and predictability of outcome. Progressive solutions may seem less appealing because of the uncertainty inherent in situations involving new behaviors with unpredictable outcomes.

Fromm (1955) viewed individuals as free to choose either progressive or regressive modes for fulfilling their needs. The choice of either alternative possesses its own sources of fear and doubt with respect to the outcome of one's decision. The exercise of choice requires the assumption of responsibility for outcome. Individuals may not only attempt to avoid the dissonance inherent in the freedom of choice, but the responsibility for unfavorable outcomes. In situations in which one may risk acceptance and self-esteem by assuming responsibility for choice, an individual may choose to abrogate control over the decision-making process (Rodin, Rennert, & Solomon, 1980). Fromm (1941) referred to this abrogation of choice as an "escape from freedom."

Thus, an individual may attempt to seek congruity and avoid the conflict and responsibility inherent in freedom of choice. One may attempt to escape from dissonance and responsibility through surrender of the authority for choice to another agent. In this instance an individual staff member may conform to the institutional purpose. Resistance to deinstitutionalization may thus be viewed as an attempt to resolve the inherent conflict between progression and regression and to seek congruence through the surrendering of responsibility to the institution.

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Another component of the need for congruity in the intrapersonal sphere is the need for a belief system which can justify behavior. Fromm (1955) referred to this as a need for a *frame of orientation*. He viewed the need for a frame of orientation as more immediate than the need for truth. Consequently, the frame of orientation may be adopted whether or not it is true or valid. Rationalization is a process by which one can make the approach to gratifying human needs congruent with the frame of orientation (Fromm, 1955). Considerable research on cognitive dissonance and dissonance resolution has shown that individuals do not always behave in accordance with their beliefs. Rather, people frequently modify their beliefs to justify their behavior (Zimbardo, 1969).

The frame of orientation developed by an individual staff member may serve as a justification for the choice of regressive modes of need gratification and the surrender of responsibility of choice and decision making to the institution. This frame of orientation may be the most amenable to change of contributions to the resistance to deinstitutionalization because it is comprised of overt verbal responses which both justify and contribute to the maintenance of institutional environments. If the frame of orientation is not effective in making one's actions consistent with beliefs, then new behaviors will be attempted or a new frame of orientation will evolve. Ellis (1970) has elaborated a number of clinically observed irrational ideas which have served the function of justifying and maintaining habitually dysfunctional behavior (e.g., the idea that one needs something stronger or greater than oneself on which to rely; the idea that it is necessary to be loved by everyone for everything one does). These beliefs may be seen as maintaining unrewarding behaviors because they enhance congruence between beliefs and behaviors. They provide a framework for exploring staff attitudes toward self and the environment which may contribute to deinstitutionalization.

STRATEGIES FOR DEINSTITUTIONALIZING STAFF

With few exceptions (e.g., Schulman, 1980; Watson, Gardner, & Sanders, 1976), the special education literature lacks evidence of programs which focus directly on the needs of institutional staff. If the position is tenable that staff needs and expectations pose a major obstacle to deinstitutionalization, then the fate of institutionalized residents becomes intertwined with the fate of staff. This necessitates the development of strategies to reduce the threats to staff posed by community-based programming.

Participation in community-based programming may be viewed as a prosocial behavior. Kanfer (1979) has discussed some of the psychosocial contributions to the rise of individualism and the decline of prosocial behavior. He proposed a model for enhancement of altruism based on the progressive shaping of prosocial behaviors so that they are perceived as contributing to personal fulfillment. Changing the motivational base for these prosocial behaviors may at first require a high degree of external reinforcement from the environment in the form of social approval and recognition. The transition from social motivation to personal motivation may then be enhanced through repeated self-reinforcement in the form of self-statements of competence and achievement. Kanfer described this transition from social to personal motivation as analogous to the development of self-control. This similarity makes available the broad range of cognitive behavior modification techniques which have emerged to facilitate self-control (Mahoney, 1974). In addition to analyzing the frame of orientation and the irrational beliefs which sustain egocentric behavior, the transition to prosocial behavior may also be facilitated through the development of contracts and explicit social agreements. Kanfer recommended these be instituted early in the staff training sequence when the cost to the individual is not great.

Kanfer (1979) has also suggested that the transition from social-motivation to self-motivation in service of prosocial behaviors may be facilitated by strong verbal reinforcement from some external facilitator. As the individual gains skill in self-reinforcement and experiences repeated rewards for altruistic behavior, gradual increases in the personal cost associated with such behaviors can be instituted. It may be anticipated that as an individual continues to experience this reward for prosocial behavior, his beliefs will become consistent with his behaviors. At this point, the prosocial behavior will come to be viewed as self-initiated rather than demanded by others, and should become more strongly established in the individual's repertoire of responses.

Kanfer's model can provide a useful starting point in developing intervention strategies for deinstitutionalizing staff. Some implications of this model are the use of the social-democratic milieu approach, external reinforcement strategies, self-reinforcement and graded exposure to community settings.

Social-Democratic Milieu

One specific application of Kanfer's model to the deinstitutionalization process might include the exploration of staff needs and concerns toward deinstitutionalization within the framework of small peer reference groups. The effectiveness of such groups has been demonstrated in the social-democratic milieu approach. This technique has been used to facilitate the return to the community of individuals after prolonged periods of institutionalization (Becker & Bayer, 1975; Fairweather, Sanders, Maynard, & Cressler, 1969). Small and autonomous groups were formed to encourage and direct pressure toward community functioning. These groups were task oriented and trained in defining and analyzing problems, generating solutions and making decisions. Active participation and responsibility for self and others were fostered. The relationship between one's actions and consequences was stressed.

The inclusion of an external facilitator in such groups may be of benefit. Such an individual might be capable of offering social rewards for the abandonment of egocentric behavior in favor of behaviors which facilitate community programming. The input of an external facilitator who is not subject to the influences of the institutional environment might also more readily facilitate change in the frame of orientation of staff members. If this strategy were applied with institutional staff, full and active support from institutional administrators would be crucial. The diffusion of personal responsibility which characterizes institutions would have to be replaced with support for active input into the decision-making process on the part of staff.

External Reinforcement

Another approach to deinstitutionalizing staff might lie in the appropriate use of external reinforcement contingencies to train staff in prosocial behaviors which parallel those of the community. While not a novel approach to developing new behaviors in staff, inservice training within institutions often results in no rewards for participants. It is all too common to see staff inservice programs conducted during lunch hours or immediately before or after a full work day. In addition, staff who try to implement any new approach or program are rarely rewarded for their efforts. Attempting to take a resident into the community for something other than a large group field trip, for example, often requires filling out forms days in advance of the proposed activity. Too often the staff person attempting to do something that differs from the normal routine is faced with more work and is, in effect, punished for his/her efforts.

If institutional staff are to exhibit new roles and behaviors which facilitate community placement, they must be rewarded for their efforts. While not a startling conclusion, this is rarely implemented.

Self-Reinforcement

While many human behaviors are not immediately followed by external consequences, most behaviors are followed by evaluative self-statements Mahoney, (1974) Bandura (1978) pointed out that even while receiving external reinforcement, humans do more than learn the contingencies between actions and consequences. They judge the progress they are making, set objectives for improvement and evaluate their personal competence.

Self-statements about one's perceived competence and achievements are important because they can influence what activities are chosen, how much effort one will expend, and how long one will persevere when frustrated (Bandura, 1978, 1977a). Training staff to use reinforcing self-statements may prove to be another useful tool for bringing about new attitudes, expectations, and behaviors. Meichenbaum (1974) has suggested the following components be included in such a training program: 1) training in problem definition and anticipation of consequences; 2) training in identification and systematic observation of self-statements; 3) graduated performance assignments; 4) specific suggestions for modifying self-statements; and 5) modeling and encouragement of positive self-evaluation.

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Graded Exposure to Community Settings

Graded exposure of staff to natural training settings might also promote the deinstitutionalization process. When beliefs and actuality differ, more realistic expectations may be developed through repeated experience (Bandura, 1978). Graded exposure may contribute to the development of more realistic evaluations of the impact of community placement. Systematic and repeated experience in community settings could have several benefits. One might be that the perceived threats to the attainment of the personal desires of staff posed by deinstitutionalization might partially be reduced. A second benefit might be that the training of residents would become more relevant as staff become increasingly familiar with the actual demands of community sites. Finally, graded exposure could help resolve problems in scheduling of staff time, which is often given as a reason for not providing community programming.

CONCLUSION

It has been stated that the institutionalization of staff may present a major problem in the deinstitutionalization of residents. Efforts aimed at community programming for handicapped persons must devote as much attention to deinstitutionalizing staff as to deinstitutionalizing residents. Much more work is needed in this area in order to: 1) identify the reciprocal interactions between various aspects of institutional organization and custodial and professional staff attitudes toward community programming; 2) identify specific staff attitudes which interfere with community programming; 3) delineate relationships between staff attitudes and behavior toward

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residents; and 4) develop intervention strategies to restructure institutional variables in order to facilitate deinstitutionalization.

Until these types of questions are addressed, efforts at community programming for severely handicapped persons will remain incomplete. Future efforts which ignore the needs and concerns of institutional staff will provide only symbolic support for deinstitutionalization rather than effective resolution of the problem.

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Toward Competitive Employment for Moderately and Severely Retarded Individuals

Paul Wehman

Recent literature and government reports suggest that the vocational training and job placement practices for most severely retarded persons are inconsistent with the level of expertise and training technology which is currently available. O'Connors (1972) reported that of the 9,339 mentally retarded individuals living in community living facilities which were surveyed, fewer than 14% were engaged in competitive employment and only a little more than half were in sheltered work or work activity centers. Bellamy and Horner (Note 1), in a survey, found that between 80,000 and 100,000 mentally and/or physically handicapped persons attended adult day care, developmental, or activity centers, many of which focused minimally on vocational training and placement. Whitehead (1979) also reported a large number of handicapped individuals in activity centers with a disproportionate few competitively employed. Similarly, the Department of Labor reports that only 41% of all disabled individuals are employed (Federal Register, 1978). These statistics suggest that the employment situation for handicapped people in this country is less than desirable.

The purpose of the present chapter is to discuss a rationale for employment in nonsheltered settings for moderately and severely retarded persons (IQ 20-51). Along with this rationale, critical factors in assessment and job site intervention are also discussed. The final section of this chapter is devoted to strategies for fading staff from job sites.

A RATIONALE FOR COMPETITIVE EMPLOYMENT

For decades, professionals and parents alike have lowered the vocational expectations for moderately and severely retarded persons by excluding them from opportunities for competitive employment (see Revell & Wehman, 1978, for example, in relation to vocational evaluation practices). Continued writings which support this philosophy only proliferate the acceptance of segregated programs which provide no access to real work environments with nonhandicapped workers and consumers. Thus, the philosophy in this chapter is not to condemn more restrictive work settings (e.g., work activity center, sheltered workshop) but instead to suggest that they form only one part of a developmental continuum enroute to sheltered enclaves in industry, or, ultimately, competitive employment. A number of reasons are considered why competitive employment must receive serious consideration by rehabilitation and special education personnel involved with work training programs.

Wages and Benefits

The first and most obvious point in favor of competitive employment placement is the increased opportunity for greater wages and benefits. With the tremendous cost of maintaining severely retarded individuals in centers which are nonvocationally oriented or which rarely lead to competitive employment, it is apparent that those individuals who can earn competitive level wages will be most favorably viewed. These persons will require less supplemental social security (SSI) assistance from the federal government, and perhaps equally important, will clear the way for other more severely handicapped clients.

In a cogent analysis of this problem, Whitehead (1979) discusses the deplorable state which handicapped wage earners are in, especially those who are mentally retarded. Whitehead says:

> The average hourly wage for all workshop clients of $0.81 per hour represented only 35% of the minimum wage rate (at that time) of $2.30. The annual earnings were even less favorable, showing an average of $666 for the total client population and only $417 for largest disability group -- the mentally retarded. The earnings fall far below the 1976 poverty level of $2870 (the level suggested by the Social Security Administration). (p. 75)

In a similar vein, the Connecticut Division of Vocational Rehabilitation points out that of approximately 12,000,000 potentially employable disabled persons, only 4,100,000 are actually working. The following logic is presented:

> Of disabled persons of working age who are not in institutions, 42% are employed as compared to 59% of the national population -- a difference of 17% or 2,100,000 people, it would mean $10,500,000 per year added to the economy -- plus what would be saved in private and public support. (Connecticut Division of Vocational Rehabilitation Project with Industry, 1979, p. 4)

Clearly, competitive wages will increase the independence of moderately to severely retarded individuals. The benefits may include insurance policies, medical insurance, dental insurance and retirement. Of course, not in all cases will this range of benefits be available; compared with the offerings of developmental centers and most sheltered workshops, however, there is a much greater likelihood of this type of fringe support.

The wages and benefits advantage, although the most obvious, may also be the most profound in the long run. Working all day for four to five dollars is not a particularly dignified remuneration for one's daily vocational pursuits. It is only that the disabled individual eventually comes to look at himself or herself as an inferior person. Furthermore, nonhandicapped individuals who visit sheltered centers may leave with a perception that the person's economic value is only worth four to five dollars a day. This is an insidious and unfair conclusion.

Integration with Nonhandicapped Individuals

Closely linked in importance to wages and benefits is the opportunity to work with nonhandicapped people and not be segregated with handicapped individuals. This issue also touches on the opportunity to serve nonhandicapped consumers and to see these consumers daily. Similarly, the likelihood of meeting new individuals and making friends with nonhandicapped persons must be noted. Working with nonhandicapped peers provides the opportunity for handicapped workers to learn to accept criticism and ridicule to which all individuals must adjust.

The increased visibility of handicapped workers in community settings also cannot be discounted as a major advantage of competitive employment. In order to elevate the expectations and perceptions of employers toward severely retarded individuals, direct contact and observation of their work abilities will facilitate continued hiring practice and retention.

Normalization

Working for a company or organization, one that is not organized necessarily for therapeutic rehabilitation of its employees, is a substantial part of nonhandicapped persons' lives. The opportunity to work regularly and not have to depend primarily on the vacillations of contract and sub-contract orders should be available to all handicapped people. Wolfensberger (1972) and Bellamy, Horner and Inman (1979) point out that work is a socially equitable activity which should be available for handicapped individuals. From work comes a feeling of fulfillment and improved self-concept (Brolin, 1976).

Greater Opportunity for Advancement

Whitehead (1979) observed that very few of the clients in workshops leave for competitive employment. According to a recent U. S. Department of Labor report (1977) only 12% of regular workshop clients and 7% of work activities center clients are placed into competitive situations each year. These data suggest that segregated work centers are not usually able to place significant numbers of clients into the real world. Consequently, the likelihood of increased wages and job responsibilities appears rather remote for many moderately and severely retarded persons.

On the other hand, a competitive placement may render opportunity for greater advancement. This may take the form of a better work shift, more regular work hours, a more pleasant job, supervisory work or better wages.

Such advancements are not certain by any means and an advocate may well be necessary; however, it may be easier to move to a different job with another company from a competitive placement as opposed to coming from a sheltered workshop or activities center.

Improved Perceptions by Family and Friends

One area which requires far more attention than it has received so far is that of attitudes and expectations of parents and other family members. For example, Lynch (1979) observed:

> Following graduation from these early educational enterprises, most moderately, severely, and profoundly retarded students merely walked across the hall to the games and crafts occurring in the adult activity centers. Thus, for the severely handicapped child and his/her parents, the expectations for a full and productive life that would reflect the abilities of the child and the quality of training were dashed at birth and continuously quashed throughout the child's development. It is not surprising that the parents of older moderately and severely retarded persons frequently prove to be barriers to the sheltered and competitive employment of their mature sons and daughters in those communities fortunate enough to have appropriate adult services (p. 26).

Parents play a major and ever critical role in facilitating the advantageous aspects of competitive employment. By helping overcome transportation problems, working out SSI limitations, and providing strong moral support to their son or daughter in the job placement, parents can make a competitive placement successful or completely block it.

Improved Perceptions by Employers

Employers also communicate about the nature of their work force. With the $3,000 tax-credit program for employing handicapped individuals, moderately and severely retarded clients are receiving closer scrutiny for employment. In some cases, employers will allow their areas to be used for nonpaid training sites. This arrangement can be beneficial as a form of sheltered training which provides a basis for ultimately coping with real situations. It also gives employers and supervisors a better means of understanding handicapped individuals and viewing them on a human level rather than as a label.

Improved Perceptions by Legislators

The information discussed earlier and reported by Whitehead (1979) about the percentage of individuals who leave workshops is not especially encouraging for convincing legislators of the viability of workshops as optimal preemployment centers. It behooves teachers and counselors to monitor carefully the number of placements, retention rates, wages earned, employer reactions, and so on, for presentation to legislators and other influential advocacy groups.

Actually, even with all of the potential advantages accrued from competitive employment placement, what is paramount is altering attitudes of critical forces, i.e., parents, employers and legislators. Since it is known that attitude change is best fostered through behavior change and demonstration (Bandura, 1969), it is evident that more efforts at training and advocating for moderately and severely retarded individuals are necessary. To improve or alter current perceptions which are presently held by these significant forces, professionals must help severely disabled clients demonstrate their abilities. This can best be accomplished by utilizing the rehabilitation engineering (Malik, 1979) and behavioral training technology which is available (Bellamy et al., 1979).

With a clear rationale for competitive employment, it is necessary now to turn to programmatic considerations. The next two sections are concerned with vocational assessment.

VOCATIONAL ASSESSMENT I:

CRITICAL FACTORS

The initial step in designing an employment program for moderately/severely retarded persons is assessment of vocational factors. The present section is devoted to specifically assessing five factors necessary for success in competitive employment. These factors include: 1) proficiency, 2) rate, 3) quality, 4) perseveration level, and 5) endurance.

These factors may be assessed in public school work-study programs, extended evaluation, volunteer or paid work in competitive employment settings or simulated work in short-term evaluations. Clearly, the best option is that which would bring pay for work while receiving training, in a real work environment with nonhandicapped co-workers. Unfortunately, as Karan (1977) notes, extended evaluation has not been extensively used. Work programs for adolescents also have not been as useful as they might be since the training content is all too often nonfunctional, i.e., putting together puzzles, stacking chips, or stringing beads.

Work Proficiency

Proficiency refers to competence in performing a skill correctly. A proficient worker is one who demonstrates the completion of a specific job accurately the majority of the time. The most efficient and direct means of verifying the presence or absence of the skill(s) is to observe and record what parts (steps) of the skill the worker can do correctly.

For example, if an evaluator or teacher knows that the client desires placement in the landscaping industry or a greenhouse, then the work skills which make up the requirement for this occupation should be identified for assessment. Task analyses of these skills may be found in commercial texts (e.g., Wehman & McLaughlin, 1980) or analyzed by the evaluators after consulting a guide such as the Dictionary of Occupational Titles for identification of the necessary skills.

The assessment process involves a two-phase process. Phase I includes the initial assessment which may occur over several days. Here is the process:

Step 1: Have necessary materials available which are being used in the assessment.

Step 2: Give a verbal cue: "Jack, sprinkle these plants."

Step 3: Observe which steps in the plant-sprinkling task analysis Jack completes correctly.

Step 4: Record the steps which are completed with a plus.

Step 5: Tell Jack he is done for today on the plant-sprinkling assessment.

Step 6: Repeat process with the next skill.

Phase II covers instructional assessment. The principle difference in this phase is that instead of a neutral (noninstructional) assessment, the teacher provides appropriate instruction, feedback and positive consequences for correct responses. The client is allowed to complete steps independently for which no previous assistance was necessary.

The instructional assessment phase is valuable even if the client does not learn all the steps because it provides empirical data on the individual's rate of learning on specific skills. It indicates how quickly the client learns, what motor aspects of the task consistently prove difficult, and it begins to establish the viability of a particular service industry for placement. Although similar to work try-out (Brolin, 1976), this form of assessment yields data which are usually more objective and specific.

Work Rate

The speed with which a client completes a job is called the rate. The most proficient client is not employable if he or she cannot work at a rate which is commensurate with the speed required by the employer. Yet many, if not most, of the vocational diagnostic tools do not systematically evaluate work rate on specific skills within a selected industry. Only after a placement is made is the determination made that a client is "too slow."

Work rate may be assessed by recording in many ways. The specific mode of measurement will probably be determined by what is critical to the job. The following are some of the ways of verifying a worker's speed: 1) percentage of on-task versus off-task behavior, 2) number of units completed within a specific time interval, and 3) evaluation by co-workers or supervisors of client's ability to get the job done in a reasonable period of time.

The critical feature in the work rate assessment process is determining what the acceptable standard is for the job(s) and/or industry in which the client is to be placed. Traditionally, it has been assumed that because a client is fast on bench work, i.e., assembling heat sealers, he or she will also be fast on jobs in a greenhouse. There are very limited data to support this notion. Work adjustment services which are purchased for the purpose of increasing production rates should be targeted for the industry in which the client is to be placed. Evaluators must be aware of what rate standards are required in different jobs in competitive employment.

Work Quality

The quality of work refers to how well the job or task is completed. This factor can be quantified by recording the number of errors which are made daily. However, work quality frequently goes beyond recording errors. For example, in cleaning a floor area it may be that when completed there is no food or other trash on the floor, yet the floor is not really clean. It may be spotted or streaked in certain areas. Hence, quality becomes a more difficult work variable to assess. Quality may also be an individual perception from employer to employer. One supervisor may accept a certain level of performance and want the client to move on quickly to the next job; another will impose a more stringent criterion.

Work Perseveration Level

Many severely disabled individuals who are moderately or severely retarded or severely sensory impaired exhibit repeated nonfunctional (stereotypical) motor behaviors. When this happens on the job or in the context of job completion it becomes a serious impediment to successful adjustment. As an illustration, consider the groundsman who feels he must pick up every piece of trash on the hospital grounds. This type of inappropriate discrimination reflects a need to perseverate on all items which appear trashlike. Similarly, the bus boy who wipes a table for 25 minutes in a repeated back-and-forth motion will not be very useful. Perseveration is a form of self-stimulating behavior which erodes work rate and interferes with quality of performance as well.

Level of perseveration can be assessed by identifying the inappropriate stimulating behaviors and then recording their presence or absence in short time periods throughout several days of job evaluation. These data also help in prescribing a relevant work adjustment program that can pinpoint the interfering behaviors in slow work rate.

Work Endurance

Even if a client shows positive endurance on all of the previous assessment indicators, without the physical strength to work for eight hours a day, five days a week, the person cannot succeed. Unfortunately, this is more often the case than it should be, largely because of the sedentary jobs in sheltered workshops. Coleman, Ayoub and Friedrich (1976) conducted a study to assess the physical work capacity of educable and trainable level retarded males. They found the work capacity level 20% to 30% below that of nonretarded individuals of the same age and sex.

This endurance assessment should also reflect whether the individual has health problems, such as epilepsy, diabetes, asthma, or any other impairments which might affect work endurance. Although these or other impairments might not interfere with a job placement, the requirement for self-administration of medication would have to be assessed.

If assessment of an individual's work endurance indicates that work performance is markedly dropping off in the mid-point to latter part of the day, it may be that part-time employment will be necessary initially. This will be especially true in those occupations where it is necessary to stand all day. Clearly, selection of jobs should reflect an analysis of the physical requirements of a given occupation.

VOCATIONAL ASSESSMENT II :

EVALUATING THE SOCIAL AND PHYSICAL FEATURES OF THE WORK ENVIRONMENT ROLE OF CO-WORKERS

In addition to the above factors which must be evaluated, there are other aspects of the potential work environment which must be taken into consideration. For example, an assessment of the co-workers who are in the client's work environment must be undertaken. Co-workers play a significant role in the long-term retention of severely retarded clients. Several complaints to the supervisor from co-workers may well influence the supervisor's perception of the client's work performance. Co-workers can provide advocacy on behalf of a client if they choose. They can also be good models and/or teachers for how to do new or complex tasks. Their role cannot be taken lightly in determining where to place a severely disabled client.

Evaluators and other instructional personnel must ask the following questions in visits to potential work environments:

1. How many co-workers are there in the vicinity of where the client would be?
2. How often do the co-workers interact together?
3. What is the rate of co-worker turnover?
4. What is the co-worker's attitude toward management?
5. Are there any other disabled employees working there?
6. What is the predominant age of co-workers?
7. What is the predominant sex of co-workers?
8. What is the predominant race of co-workers?
9. Are the co-workers in any union organization?

The answers to these questions will not only help in identifying an appropriate placement, but they will also provide insight to staff who might be involved in an on-the-job intervention program.

Employer Perceptions

If the employer is not willing to hire a handicapped employee, then this evaluation need go no further, for the time being at least. In most cases, however, if a job is available and the client is qualified, it is unlikely that a blanket rejection will be forthcoming. However, what must be evaluated is whether the employer will follow through on promises of employment or back out when the time actually comes to hire. Also, the degree of employer support which will be provided for the client in the initial stages of employment must be determined. Although these areas are not easy to assess, local rehabilitation counselors can generally give some information on how selected employers or industries react to handicapped employees. Some employers may be willing to sign short-term contracts on trial employment for disabled workers. This is usually a good indicator of commitment.

Consumers

With certain jobs the worker will have little or no opportunity to see or interact with the customers or consumers of the service which the client provides, i.e., pot scrubber. In other situations, i.e., working in a greenhouse or garage, there may be ample opportunity to be around consumers. As with co-workers, friendly consumers who are laudatory of the client can be important allies in helping the individual retain his or her job. If it is evident that the job requires significant amounts of time with consumers, then a careful assessment of the client's social skills must be conducted.

Physical Layout of Work Environment

The physical design of the work area will play an important part in deciding whether to make a placement. Narrow doorways, inappropriately designed toilets or other physical barriers may prohibit those in wheelchairs from working, despite Section 504 assurance. Mobility and orientation requirements for completion of the job should be evaluated at an early point in the analysis of the work environment. For example, in a groundskeeping position on a college campus, it is necessary to be able to find one's way around without getting lost, although this is a skill often taken for granted.

The next section is directed toward the problems which can occur during job site intervention with moderately/severely retarded workers.

PROBLEMS ENCOUNTERED IN JOB-SITE TRAINING

Once moderately/severely retarded individuals are assessed, an on-the-job training program may be initiated in a nonsheltered work environment. Placements in real work environments can result in a host of unexpected problems. Of course, problems may be more frequent and/or diverse in nature as the functioning level of the person decreases. For example, some moderately to severely retarded individuals (those in the general IQ range of between 20-51) are likely to present fewer motivational deficiencies and more work proficiency problems, i.e., speed quality. Higher functioning individuals seem to present more off-task and noncompliant behaviors, although they usually grasp job requirements quickly. Five major problem areas are discussed which must be addressed across all functioning levels of handicapped workers when trained in nonsheltered work settings. These problem areas include broadening the range of jobs a client can perform, improving job quality, increasing work rate, working without supervision and fading trainee assistance.

Broadening the Range of Jobs a Client Can Perform

Traditionally, moderately and severely retarded persons have received employment training which was limited in scope and which did not sufficiently prepare the individual for the local job market. Training has taken place in nonfunctional skills which purportedly help the client become "ready" for work, i.e., sorting colors or shapes. Yet the range of job competencies required, even in unskilled food service or custodial utility positions, can be far-reaching, depending on the size and location of the cafeteria or hotel.

If a client cannot quickly learn new jobs, then it is unlikely he or she will be able to maintain employment. Hence, one problem which most training programs do not adequately address is the development of work skills which are generalizable across a variety of specific jobs and settings.

Improving Job Quality

Each place of employment has certain standards and methods by which a job must be done. These standards vary within every company and organization. It is critical that teachers and placement specialists be able to analyze job requirements and employer expectations for different jobs. Both aspects must be analyzed. If a supervisor feels that a client has been "pushed" on him or her by the Personnel Director, the requirements of the job may be interpreted more stringently by the supervisor. For example, picking up trash on the grounds could be a very difficult job to master if the supervisor is rigorous in what is accepted as clean or not clean. The severely handicapped worker must be competent on the job and maintain a level of quality equivalent to nonhandicapped co-workers.

Increasing Work Rate

Even if performance is errorless, speed will also be considered. The worker who picks up every piece of trash but takes three days to do it might be terminated from his or her job. What is critical in this situation is analyzing why the person is slow. By assessing what factors are interfering with rate, an eventual strategy can be devised to improve rate. There are several possible reasons for diminished or inconsistent rate: 1) lack of reinforcement or positive consequences associated with the job, 2) physical or health-related problems which make it difficult to perform at an adequate speed, 3) frequent distracting factors in job areas, and 4) poor memory by the client, thus requiring continual repetition of earlier parts of task.

An analysis of the trainee's work characteristics and the job setting over a period of several consecutive days will usually yield information which will facilitate program planning.

Working Without Supervision :

Self-Initiated Performance

Probably one of the most frequently heard complaints from employers about severely disabled workers who are mentally retarded is that they cannot work independently over sustained periods of time. The lack of self-initiated work performance can partly be attributed to educational programs which foster dependence on the teacher by students. Limitations in self-initiated work can also be traced to the initial problem noted, i.e., the ability to perform only a limited number of jobs. Those workers who do not self-initiate performance limit their employability in three significant ways. First, the probability of advancement to more stimulating work is greatly diminished. Second, the perceptions of co-workers may be negative. Third, the client may lose the job if the employer gets tired of continually reminding him or her of what has to be done.

Fading Trainee Assistance

Most on-the-job training programs which are effective with severely handicapped individuals provide for direct trainer assistance and guidance. Helping the client adjust to the job is an important part of the supervisor's role. This form of intervention is usually welcomed by the company's supervisor, who is looking for assistance as well. Unfortunately, the individual will become dependent on the trainer unless there is a systematic effort to fade (reduce) the amount of assistance. The number of hours and minutes provided in training should be recorded, thereby yielding a daily or weekly bench mark of guidance.

TECHNIQUES FOR OVERCOMING ON-THE-JOB TRAINING PROBLEMS

There are several basic instructional techniques which may be used to overcome the problems described previously. These techniques are not complex, and when provided in an orderly sequence, can facilitate behavior change (Alberto & Schofield, 1979; York, Williams & Brown, 1976).

Verbal Instructions

The initial form of assistance offered should be a verbal cue or instruction to correct the problem. A verbal cue may also be used to increase rate or to prompt a sequence of self-initiated work behaviors. Verbal instructions are the most natural form of cue or assistance provided in work settings (Schutz, Keller, Rusch, & Lamson, 1979). With severely handicapped workers, instructions should be and short and direct and minimize extraneous words (Wehman & Garrett, 1978). Inservice training of employers and co-workers in the trainee's work environment should include the type of verbal cueing which is optimal for the trainee.

Gestural Assistance

Pointing is another effective means of eliciting behavior from severely handicapped workers. Pairing a verbal cue with a gesture or looking in the desired direction are other acceptable formats of communication in most work establishments. Gestures frequently are more effective than verbal cues alone with clients who have difficulty in processing what the supervisor is asking. Gesturing is also a more universal form of communication which allows nonverbal clients to initiate and receive social interactions.

Modeling and Demonstration

Showing a client how to do a job is a more involved and time-consuming form of instruction than merely using cues. Ideally, preemployment training should already have taken place so that job proficiency is not a question.

Also, for modeling to be a successful instructional strategy, the client should be able to imitate. Inservice of employers in modeling techniques should reflect the necessity of demonstrating skills in small steps or clusters.

Physical Guidance

Some clients will require hands-on assistance and manual guidance in completing portions of a skill. Fast-paced work environments are not usually the ideal places for this type of training, which requires precise instruction. It may be, however, that a new piece of equipment is introduced or the client's job role is expanded to include new tasks; if so, then physical assistance may be necessary.

Practice

Establishing a work routine which provides substantial practice and repeated trials on a task(s) is the surest way of increasing work proficiency, even though extended practice will probably not be possible while on the job. In training of severely retarded workers, however, it is a good practice to start on a job with few tasks initially, i.e., running a freight elevator, cleaning pots, or wrapping silverware.

Feedback

Providing information to a client as to how he is doing on a job is termed feedback. Feedback lets the individual know that the work being completed is not correct or that it is very well done. In either event, it is good instructional strategy to inform the individual as soon as possible, especially with a new trainee.

Social Reinforcement

Social reinforcement includes praise, approval, attention and compliments. Social reinforcers can come from parents, co-workers, training staff, employers, or even from the worker himself. To be effective they should be contingent, that is, immediately follow the target behaviors being developed. When a severely handicapped client is new on the job, immediacy of reinforcement will help him understand the relationship between the special attention that is being received and the job just completed. Labeling, or telling why reinforcement is being given ("Ted, nice job of scraping all the plates!"), will also help the client understand.

In fast-paced work establishments with all nonhandicapped workers, it is still possible to follow these principles. It may not, of course, be possible throughout the workday, but the client may need this specific assistance only on selected parts of the job. The key factor in inservice for employers is to stress the importance of each of the above points in utilizing reinforcement. Also, involving other individuals who previously have been excluded, i.e., family members, in reinforcement of the client may prove fruitful in motivating the worker.

SPECIFIC ADVOCACY STRATEGIES

As was noted in an earlier section, it may not always be possible to foresee all possible circumstances which arise in a work environment. Therefore, it is necessary to plan advocacy strategies which utilize other nonhandicapped individuals who may be willing to assist severely handicapped clients. Advocacy involves speaking for or acting on behalf of the handicapped individual. It cannot be a passive process; it must be planned, not left to chance. Ultimately, if nonhandicapped individuals in the work environment can be enlisted to assist the client in work adjustment, the probability of long-term job retention is higher. Several specific advocacy strategies will be described which may be utilized in job placement and retention programs for severely handicapped persons. The basic assumption is made that a teacher or counselor is initially present in the work environment to provide training and advocacy.

Informing Co-Workers of Client's Behavioral Characteristics

In order to facilitate co-workers' sensitivity toward the client, it is usually a good practice to discuss the incoming client with workers. For example, if Robert is beginning work for the first time and is deaf and severely mentally retarded, it will be necessary to alert co-workers of these disabilities. In addition, by pointing out the positive features of Robert's abilities and his strengths, i.e., strong work attitude and/or parental support, co-workers will be able to view Robert with a more balanced perspective.

In a similar fashion, it is generally wise to discuss some of the expectations and potential which a disabled client will have for a certain job. There is wide variability between nonhandicapped co-workers' perceptions of the disabled employee's work capacity. This is especially true in jobs where there are many uneducated nonhandicapped persons employed. If co-workers can be prepared for the client's personality and learning characteristics, the initial steps/stages of the placement are facilitated and it is easier for the staff to fade assistance.

Maintaining Regular On-Site Contact

Perhaps the most critical element in successful on-the-job training programs with severely disabled workers is the sustained presence, i.e., training and/or advocacy, of the job counselor or teacher. Bearing in mind that most moderately or severely retarded individuals have little experience at independent functioning in the real work or community environments, it should be apparent that the initial entry to these settings will be difficult without assistance.

The presence of staff, initially, is necessary for the following reasons: 1) to help train client in specific job functions; 2) to help train client in appropriate social behaviors; 3) to help client and co-workers communicate, or at least get adjusted to each other's communication system; 4) to demonstrate to supervisor the staff commitment to client adjustment; 5) to demonstrate to parents the commitment to helping the client adjust; and 6) to observe and record client progress.

Although this approach may be criticized as being too costly or resulting in a difficult fading-off of staff, realistically it is the only way with many severely retarded persons, especially those who have never received training in competitive environments.

Furthermore, it is possibly the most effective form of advocacy because it is ongoing and sensitive to changes in the attitudes of workers and supervisors.

Helping Client Complete Job

As an extension of the previous advocacy strategy, helping a client complete a job may also be utilized as an advocacy strategy. This should not necessarily be construed as performing the job for the worker. In some cases, however, it may be quite appropriate to provide physical assistance when a worker is having difficulty learning a particular aspect of the job.

Reinforcement of Nonhandicapped Co-Workers

Looking for opportunities to praise, compliment, or thank nonhandicapped co-workers for their support and assistance in helping a client adjust is another advocacy strategy. Providing recognition to an employee through a written letter with a copy to the personnel director can be an even more effective means of displaying gratitude to co-workers. It is critical that a positive co-worker attitude toward handicapped employees not be taken for granted. It cannot be assumed that this attitude is normal and therefore should go unreinforced. Without embarrassing co-workers, subtle reinforcement can serve to strengthen relationships between handicapped and nonhandicapped employees.

Providing Parental Support in Problem Situations

Parental assistance and support plus regular communication eventually may lead to conversion of the most recalcitrant parents to becoming more supportive. Placing a client competitively for the first time may result in the following type of questions:

1. What happens to John's SSI payment?
2. How does John get to work?
3. Will John get too tired? He's never worked 40 hours a week.
4. Will John be alright? Will his co-workers take advantage of him?
5. John doesn't need to work -- we give him all the money he needs.

In order to respond intelligently and persuasively to these points, reasonable answers must be carefully thought out. It may be that parents who are extremely concerned might come to the job placement from time to time to see John work. Once parents trust staff, then they may become strong advocates of a job placement program. Such parents can help influence reluctant parents as well. Before reaching this level of trust, however, the informational advocacy described previously is necessary. Parents may respond negatively only because they are frustrated and do not know where to get satisfactory answers.

Reinforcing Employers

As noted earlier, co-worker reinforcement is necessary. Equally important is recognition for employers who are willing to hire severely retarded employees. There are a number of ways to draw attention to the floor supervisor or department director who supports disabled employees.

These include: 1) employer plaques or commendations which leave a permanent product in the employer's office; 2) reports to the television or newspaper media describing the employer's efforts; 3) newsletter for other employers which describes the affirmative action efforts of your employer; 4) letters to the employer's supervisor expressing thanks for assistance and support; and 5) written or verbal thanks and compliments directly given to the supervisor.

Although these techniques are not extensive, it is once again a question of not leaving the willing employer unattended or taken for granted. Employers can and do vacillate; that is, they may change their minds about hiring handicapped persons. Also, they may be under covert pressure from other subordinates not to hire moderately/severely retarded people to do jobs similar to those of nonhandicapped co-workers. Meeting these pressures successfully and maintaining an affirmative action program for severely handicapped workers must be reinforced.

FADING STAFF ASSISTANCE FROM THE JOB SITE

To this point, discussion has centered on appropriate assessment variables, job-site training problems and techniques for solving these problems and client advocacy at the job site. It is also important, however, to consider strategies for fading staff assistance, i.e., the gradual removal of the teacher or counselor from the job site. The strategies below may be utilized to facilitate a systematic reduction of staff time.

Transferring Verbal Control from Staff Trainer to Real Supervisor

Initially, all training, prompts, and job requests may be filtered from the real supervisor through the trainer to the client. This is especially true with nonverbal trainees or other clients with special problems which might normally inhibit employer communication. As the number of trainer prompts approaches those normally required to direct a nonhandicapped worker, the trainer begins involving the real supervisor in the worker program. This is done initially by modeling worker prompts while the real supervisor is in close proximity. The trainer can later explain to the real supervisor what prompts have been necessary to ensure the client doing his or her job. In addition, it must be restated that the trainer will not always be able to remain on site full time.

Reduction of Supervision and Client Accessibility to Trainers

A second technique for overcoming employer and client dependence on staff is to reduce systematically the trainer's presence. This promotes the number of supervisor-client interactions and transfers the locus of control to the real supervisor. The initial periods of trainer absence should be during a time when the operation is at a slower pace and when the manager is not under pressure. The manager will be more likely to offer additional time to work with the client. Eventually the trainer's presence is reduced over more days and during higher pressure times. Each client will require differing trainer reduction schedules. In addition, some minimal assistance may be necessary on a continuing basis for clients with more severe disabilities, where less disabled clients may be maintained with little or no follow-up services.

Transferring Reinforcement of Client to Real Supervisor

Early in training the client is frequently prompted and reinforced by the trainer. In some cases, the client may even receive his or her payroll check from the trainer who can help the client through the check-cashing and depositing process. Once the client realizes the significance of the paycheck, however, it is important for the supervisor to present the client's check. Modeling verbal reinforcement while supervisory staff is present, and explaining to the supervisor the benefits of paying attention to work well done must be initiated as the trainer begins a reduction in the time that he or she is present. Changing project staff during training facilitates easier generalization from supervisor to supervisor.

Teaching Self-Reinforcement

Teaching the client the significance of the paycheck and producing a chart showing daily earnings may facilitate or illustrate a basic self-reinforcement technique. For example, one client's job is to remove and stack dishes, pots and silverware as they come through the dishwashing machine. If the client is not fast enough the machine will stop automatically until he or she can catch up. The client may be taught to self-monitor and self-reinforce by making statements to himself or herself such as: "Good job, the machine has only stopped two times this morning." Another self-reinforcement technique is matching high levels of behavior with reinforcement such as allowing the client to give himself or herself short breaks when caught up or when working ahead of criterion. Self-reinforcement techniques can be utilized to help maintain criterion levels of performance as the trainer begins reducing his or her time out.

Use of Co-Workers

Enlisting nonhandicapped co-workers in the training process will, in the long run, facilitate job retention. It must be recognized that once a trainer begins to withdraw from the work site, the co-workers are the peer group with which the client must interact acceptably. If these individuals are helpful and supportive, then the effects of the client's disability may very well be minimized. On the other hand, if the individual is not accepted, then complaints to the supervisor may eventually result in termination of the client.

A suggested practice for having co-workers become involved is for the trainer to gain rapport with them by explaining about the client's disability, background and related behavioral characteristics. In this way, co-workers will not be shocked or upset at the intrusion of a disabled individual into their work environment.

Unobtrusive Observation Schedules

When workers, handicapped or nonhandicapped, know their behavior is being recorded and observed, they usually work faster (e.g., Fisher, Wehman, & Young, Note 2). This finding suggests that the presence of a trainer may affect the performance of clients. Therefore, another suggestion for fading involves trainers observing clients unobtrusively or sending unfamiliar staff members to record an individual's progress.

CONCLUSION

This chapter has presented some critical program issues relevant to the placement of moderately and severely retarded youth and adults in nonsheltered work settings. The approach advocated in this chapter is characterized by: 1) behavioral assessment, 2) analysis of potential work environments for the severely retarded worker, 3) problems which arise on the job site and methods for managing these problems, 4) advocacy guidelines, and 5) strategies for fading staff time from a job site. For supportive long-term data and case studies which empirically document this approach, the reader is referred to Rusch and Mithaug (1980), Wehman and Hill (in press), and Wehman (in press).

The placement of moderately and severely retarded individuals into competitive employment has taken place infrequently. Yet the training technology is available for this type of vocational placement to become a reality for many more severely handicapped persons. It is incumbent upon teachers, counselors, and administrators to work closely with employers and parents toward this vital habilitation goal.

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